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Joint Service Chemical and Biological Defense Program

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FY00-02 Ov[illegible]ew

Preface

In 1993, Congress passed Public Law 103-160, Section 1703, which created a Joint Service Chemical and Biological Defense Program (CBDP). The mission of the CBDP is to provide world-class chemical and biological defense capabilities to allow the military forces of the United States to survive and successfully complete their operational missions — from peacetime contingency missions through two nearly simultaneous major theater wars across the entire spectrum of conflict—in battlespace environments contaminated with chemical or biological warfare agents. Under the oversight of a single office within the Office of the Secretary of Defense, the Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense, the individual Services, working within the framework of a Joint Service Agreement, have planned and supported a robust, coordinated program. This overview document provides highlights of our major efforts within the program, providing a summary of FY00 accomplishments and goals for FY01 and beyond. A separate, more detailed DoD Annual Report to Congress on the Chemical and Biological Defense Program is provided to the Congress.

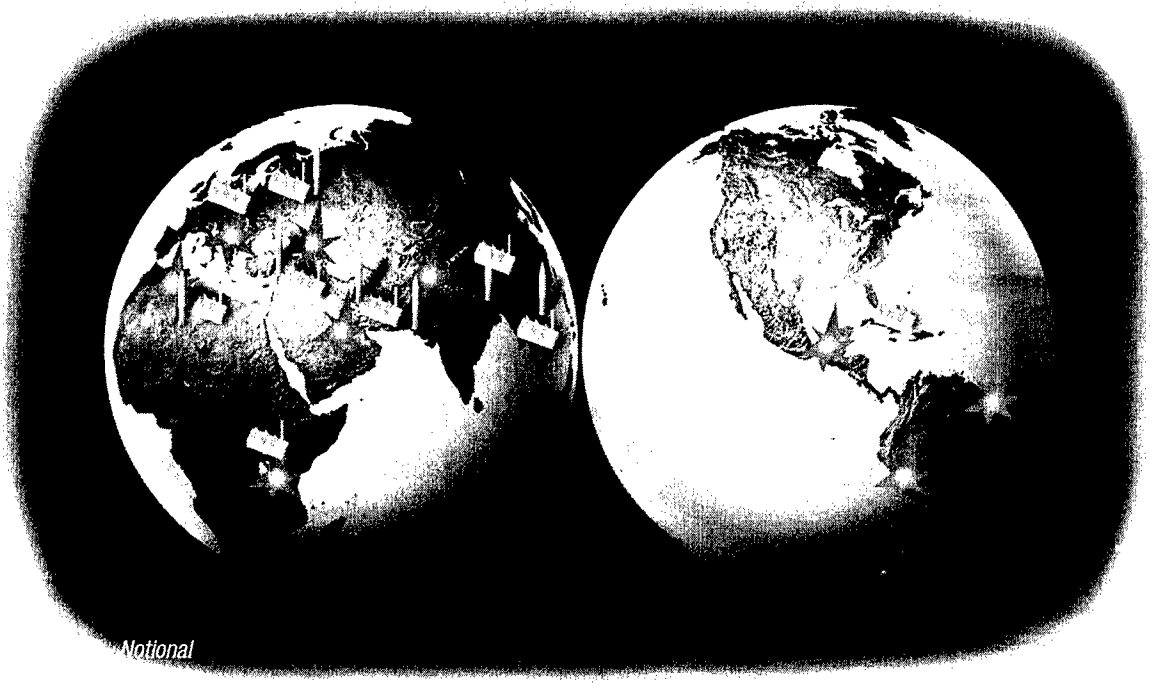
The CBDP focuses on the development and acquisition of an integrated system-of-systems to defend against the various chemical and biological warfare threats facing U.S. forces. No single technology or approach is likely to be effective. Consequently, detection and identification of CB threats, individual and collective protection, decontamination and medical countermeasures play important, complementary roles in countering chemical and biological threats.

Since Operation Desert Storm, the CBDP effectively developed and fielded new or improved capabilities that address shortfalls identified during that war. A few examples include the fielding of the Biological Integrated Detection System (BIDS), replacement of chemical alarms with the Automatic Chemical Agent Detector and Alarm (ACADA), and procurement of new, lightweight chemical protective suits for the entire force. Significant advances in research promise to yield continuous capability improvements over the next decade. These include: medical countermeasures against chemical and biological agents; improved, lightweight chemical detectors; advanced biological identification and diagnosis capabilities; improved decontamination capabilities; and advanced warning systems that provide near real-time hazard analysis and forecasting capabilities. Additionally, a Modeling and Simulation (M&S) commodity area was established to develop common use chemical and biological models and simulations. These capabilities will continue to ensure that U.S. forces are the best-equipped forces in the world to survive, fight, and win in a chemical or biological contaminated environment.

ANNA JOHNSON-WINEGAR, PH.D.
DEPUTY ASSISTANT TO THE SECRETARY OF DEFENSE
FOR CHEMICAL AND BIOLOGICAL DEFENSE

A Dangerous World...

- *Regional Hotspots*
- *Proliferation of WMD Technology*
- *Rogue States/Terrorist Organizations*



- Delivery Means/Payloads
- Dual Use Capabilities
- Regional Conflicts/Terrorism

Capability	Risk
High	Low
Medium	Medium
Low	High

FEDERAL RESPONSE

- **International Agreements**
  - Chemical Weapons Convention (CWC)
  - Biological and Toxin Weapons Convention (BWC)
  - Missile Technology Control Regime (MTCR)
- **National Security Strategy**
  - **Chemical and Biological Defense Program**
  - Counterproliferation Program
  - Domestic Preparedness Program
    - Crisis Management
    - Consequence Management
      - Federal (Integrated Task Forces, Focused Investment Strategies)
      - State/Regional (Federal-State Coordination, State of Emergency Services)
      - Local (First Responders, Incident Command System)

...A Fully Integrated Program

(Intelligence, Operating Structures, Tools)

Elements of National Response

Strategic and Tactical Intelligence
Battlefield Surveillance
Passive Defense
Proliferation Prevention
Active Defense
Counterforce
Countering Paramilitary/Terrorist Threat

Commodity Areas

- Contamination Avoidance
- Decontamination
- Protection (Individual/Collective)
- Medical
- Modeling & Simulation

Focused Investments Directly Responsive to Operational Requirements

Potential Target Array

Civilian
National Infrastructure

Military
National Military Command Structure

Shared Capabilities

Shared Capabilities

Shared Capabilities

Critical Support Nodes:
- Utilities
- Transportation
- Food Supply Chain
- Medical Facilities

Manufacturing and Agriculture

Population Centers

Theater Support Facilities
- Ports
- Airfields
- Depots and Staging Areas

Unengaged Assets

Committed Combat Elements

Consequence Management

A Full Partner in Preparedness

Force Protection

Dominant across the full spectrum of military operations – persuasive in peace, decisive in war, and preeminent in any form of conflict... These are the goals of Joint Vision 2020, the vision that guides the continuing transformation of America's Armed Forces.

Implementing the Vision

The focus of Joint Vision 2020 is full spectrum dominance, which is achieved through the interdependent application of dominant maneuver, precision engagement, focused logistics, and full dimensional protection. Attaining that goal requires a steady infusion of new technology, modernization, replacement of equipment, as well as the doctrine, training and leader development necessary to exploit and enhance the advantages of technology.

Dominant Maneuver

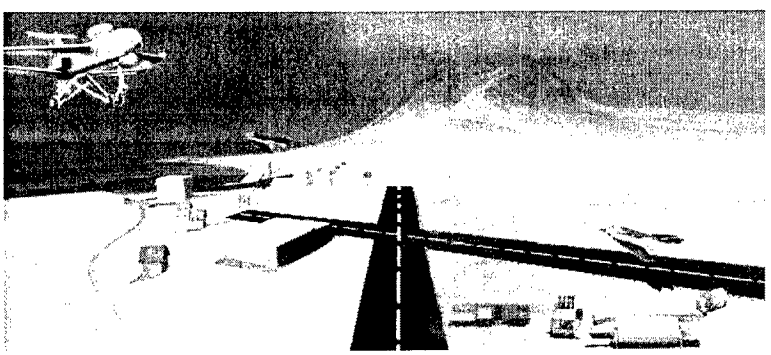
...the ability of joint forces to gain positional advantage with decisive speed and overwhelming operational tempo in the achievement of assigned military tasks.

Challenge: Adversaries may use chemical and biological weapons to restrict our areas of operation, negate our advantages in speed and operational tempo, and disrupt critical command and control functions.

Required Capabilities: U.S. forces must be able to "see" the otherwise invisible chemical and biological hazards, avoid contaminated areas when possible, and continue to operate at the highest possible operational tempo. Integrated sensor networks and battlespace management systems will allow operational tempo to be maximized while attempting to avoid contaminated areas. When unable to avoid contaminated areas, U.S. forces will employ individual and collective protection equipment, and medical pretreatments to continue operations at high levels of effectiveness. Combat power is restored as soon as possible by decontamination and medical treatment. The synergistic combination of avoidance, protection, and rapid restoration of combat power allows the Joint Force Commander — not the chemical and biological threat — to dictate the tempo of the conflict.

Precision Engagement

...the ability of joint forces to locate, surveil, discern, and track objectives or targets. The pivotal characteristic of precision engagement is the linking of sensors, delivery systems, and effects.



Challenge: Chemical and biological warfare can dramatically disrupt the real-time command, control, communications, intelligence, and execution linkage that is necessary to support precision engagement operations.

Required Capabilities: U.S. forces must be able to continue to operate all critical linkages of the precision engagement chain, at high levels of effectiveness and under CB threat conditions. Sensitive command and control equipment must remain operational during CB attacks and must survive the contamination and decontamination process. Ports and airfields must be able to maintain munitions throughput and aircraft sortie generation rates. The ability to sustain the precision engagement campaign will allow U.S. forces to deliver lethal and non-lethal effects throughout the full depth of the battlespace.

In future operations, U.S. forces will encounter sophisticated adversaries, who will adapt as our capabilities evolve. Future opponents will avoid our strengths and exploit our weaknesses. Adversaries will use asymmetric approaches, such as chemical and biological weapons, to attempt to deter, delay, or counter the application of U.S. military capabilities. These asymmetric approaches may be the most serious danger that the United States faces.

The Chemical and Biological Defense Program addresses the doctrine, training, and equipment support required to counter this threat. This ensures that our forces are ready to protect themselves and deliver victory for our Nation in the uncertain environment of the current and future battlefield.

Focused Logistics

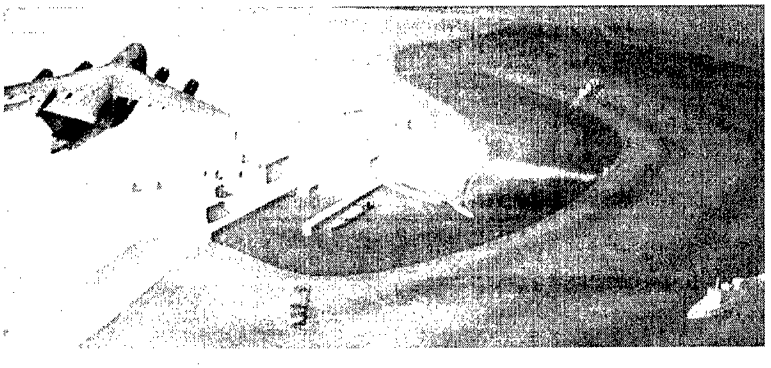
...the ability to provide the joint force with the right personnel, equipment, and supplies in the right place, at the right time, and in the right quantity, across the full range of military operations.

Challenge: The joint logistics system will evolve from a supply-based process, with large, in-place stocks of materiel, to a distribution-based process with time-definite delivery requirements. In the past, the protection of the logistics system focused on the "supplies." With this change, the focus will shift to the protection of distribution systems and logistics command and control nodes.

Required Capabilities: As the "piles of supplies" disappear from the joint battlespace, the protection of the logistics system becomes more like the protection of the precision engagement chain. Ports and airfields must sustain their throughput rates, while operating at high effectiveness under CB threat and recovering rapidly from CB attacks. Logistics operations must have the detection, protection, and decontamination resources to keep supplies flowing to the joint force. The protection of the logistics command and control capability will be critical.

Full Dimensional Protection

...the ability of the joint force to protect its personnel and other assets required to decisively execute assigned tasks.



Challenge: The history of chemical and biological warfare is one of surprise. U.S. forces must be prepared for the introduction of new threats and new agents. With smaller numbers of forces in the theater of operation, the degradation of performance associated with legacy protective equipment will no longer be acceptable. U.S. forces must be able to maintain an advantage in operational tempo under CB threat conditions.

Required Capabilities: Detection, identification, medical, and protection capabilities must counter the evolving threat. Individual and collective protection equipment must allow individuals and crews to operate high-technology systems without significant degradation in performance. Real-time information, combining intelligence, operational, detector, and meteorological inputs, must be available to provide commanders with an "up-to-the-minute" picture of the CB battlespace. This will allow organizations to operate at maximum effectiveness, with an acceptable level of CB risk. This will also deny our adversaries the political, psychological, and military advantages of CB weapon use, and provide our Nation with a force that is truly dominant across the full spectrum of military operations.

The Chemical and Biological Defense Program (CBDP) invests in technologies, doctrine development, and realistic training to provide improved capabilities to the Joint force ensuring minimal adverse impact to operational tempo on the asymmetric battlefield. CB defense programs are categorized broadly under five commodity areas:

Contamination Avoidance

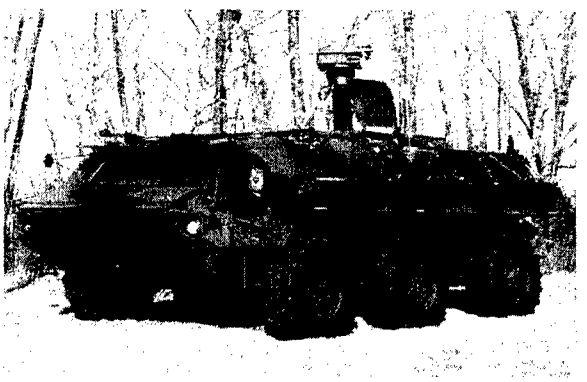
Concept: The earliest possible warning is fundamental in avoiding chemical and biological agent contamination. The goal of battlespace contamination avoidance is to provide a real-time capability to detect, identify, map, quantify, and avoid biological and/or chemical agents, including selected Toxic Industrial Chemicals/Materials (TICs/TIMs).

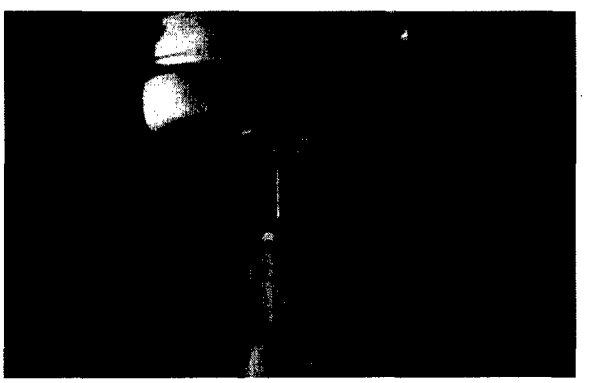
Focus: The CBDP pursues technologies incorporating and integrating standoff and early warning; reconnaissance; biological and chemical point detection; and information processing. The technology focus is on increased detection sensitivity, lower detection thresholds, specificity across the evolving spectrum of threat agents, reduced false alarm rates, and integration of NBC detectors into various mapping and communication networks to provide common warning and reporting to the joint force.

Protection (Individual/Collective)

Concept: In the event that early warning is not possible or units are forced to occupy or traverse CB contaminated environments, individual and collective protection systems provide the warfighter life-sustaining and continued operational capabilities. Individual protection equipment includes protective masks, suits, boots, and gloves. Collective protection equipment includes two general categories: stand-alone shelters and integrated systems that provide contamination-free, environmentally-controlled surroundings for personnel to perform their issions. Collective protection, i.e., overpressure, can be applied to mobile and fixed command posts, medical facilities, rest and relief shelters, buildings/fixed sites, vehicles, aircraft, and ships.

Focus: The CBDP is pursuing mask technologies that provide greater user comfort, reduce breathing resistance, and improve compatibility with combat weapon systems; and suit technologies that will result in lighter, less burdensome, but equally protective next generation suits for ground and aviation personnel. Also, the CBDP pursues technology advances that improve generic CB protective filters and fans, and advances that reduce weight, volume, cost, logistics, and manpower requirements.





Medical

Concept: Efforts include development of medical materiel and equipment items necessary to provide an effective medical defense against chemical and biological agent threats facing U.S. forces on the battlefield.

Focus: Chemical defense efforts include development of pretreatment therapeutic drugs, diagnostic equipment, and other life-support equipment for protection against chemical warfare agents and management of chemical warfare casualties. Biological defense efforts include development of vaccines, drugs, and diagnostic medical devices for protection against validated biological warfare agents to include bacteria, viruses, and toxins of biological origin.

Decontamination

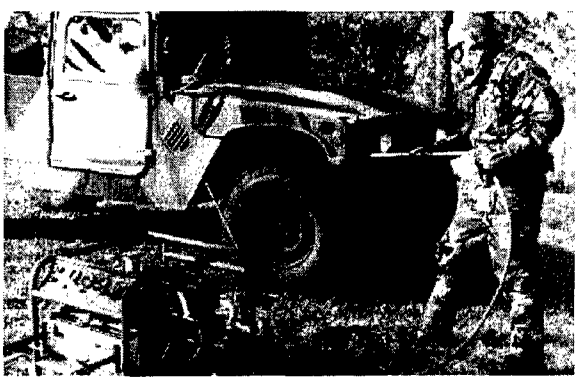
Concept: In the event that contamination cannot be avoided, personnel and equipment must be decontaminated in order to reduce and/or eliminate hazards after chemical and biological agent employment. A family of decontaminants and applicators, equipment, and procedures are under development for decontaminating mission critical areas within large area ports, airfields, and other fixed sites, which may be targeted for persistent agent contamination. Decontamination systems provide the Joint force a regeneration capability for units that become contaminated. Modular decontamination systems have been developed to provide decontamination units with the capability to tailor their equipment to support specific missions.

Focus: The CBDP is pursuing technology advances in sorbents, coatings, and physical removal, which will reduce logistics burden, manpower requirements, and lost operational capability associated with decontamination operations.

Modeling and Simulation

Concept: Modeling and Simulation (M&S) efforts are focused on meeting emerging requirements in the CBDP to provide standardized CB analysis efforts across the Services. The goal is to generate valid joint requirements, develop Verification, Validation, and Accreditation (VV&A) standards, develop policies and procedures for M&S standardization, develop tools to establish and maintain battlespace situational awareness, and create a virtual proving ground for CB testing.

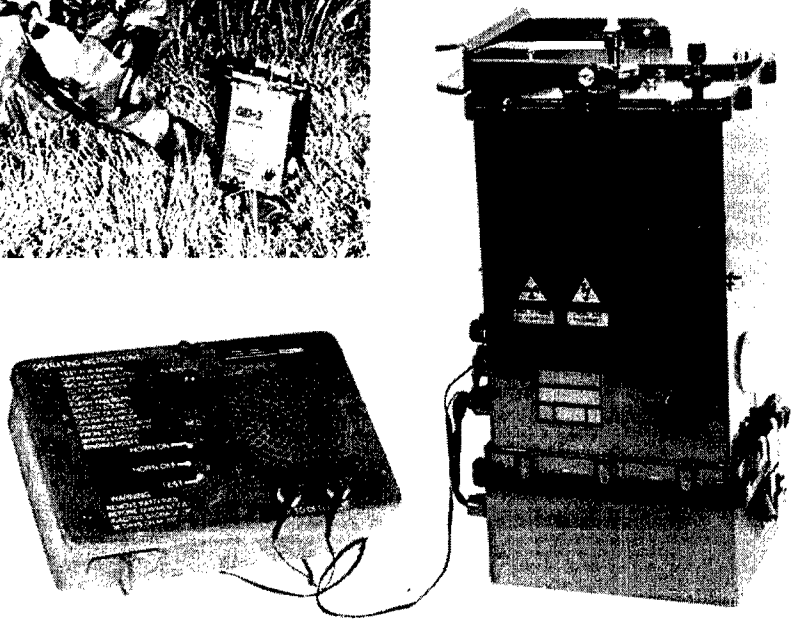
Focus: The CBDP is pursuing technologies that provide for a standardized representation of the effects and environments associated with CB agent employment, reaching across the domains of analysis, training, and acquisition. The M&S effort will provide the CB community with models, suites, and systems that will accurately model release sources, atmospheric transport and dispersion, casualty predictions, unit degradation, defensive measures, and CB defense equipment.



Automatic Chemical Agent Detector and Alarm (ACADA)

Lead Service

- Automatic point detection and identification of nerve and blister agents
- Man-portable vapor alarm
- Enhanced capability over the currently fielded M8A1 detector



Contractors:

ACADA
Graseby Dynamics, Ltd.
United Kingdom

Surface Sampler
SBCCOM
Edgewood, MD

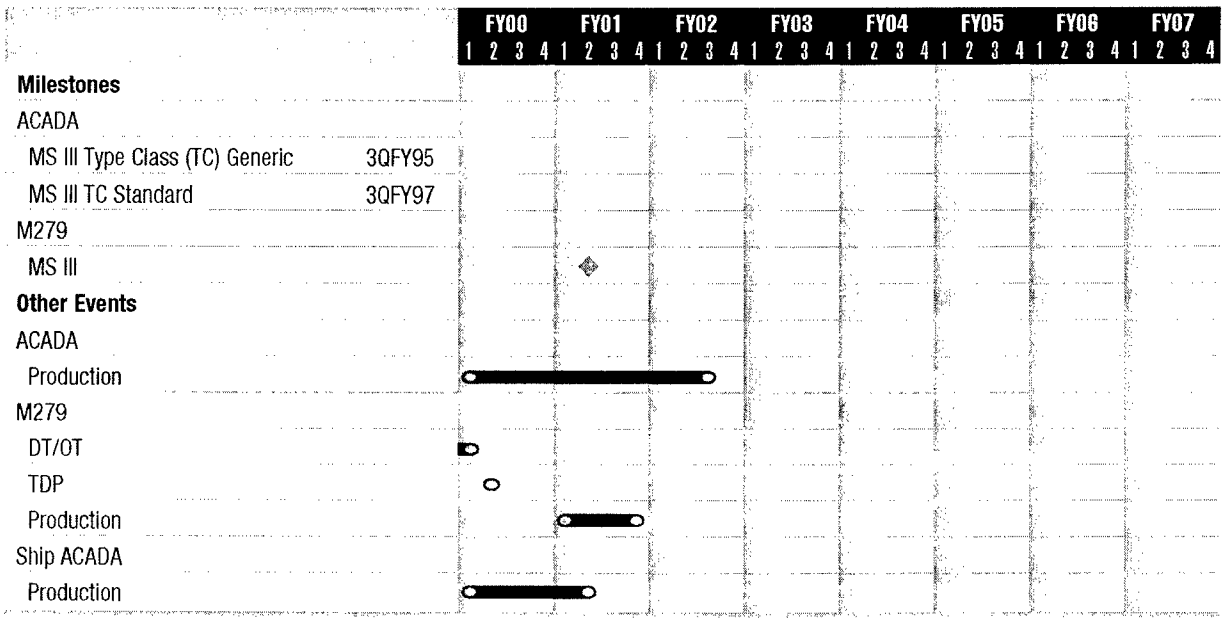
Ship ACADA
STR, Inc.
Fulton, MD

The ACADA is an automatic chemical agent alarm system capable of detecting, warning and identifying standard blister and nerve agents simultaneously. The ACADA is man-portable, operates independently after system start-up, provides an audible and visual alarm, and provides communication interface to support battlefield automation systems. It can also operate with the M279 Surface Sampler. Improvements over the M8A1 include: increase in sensitivity, decrease in responsiveness to interferents, ability to operate in a collective protection environment, and ability to operate on and in vehicles.

- Procured 5,053 ACADA:
  - Army 4,655
  - National Guard 398
- Procured 235 Ship ACADAs for the Navy.
- Completed Developmental Test/Operational Test (DT/OT) for Surface Sampler.
- Prepared Technical Data Package (TDP) for Surface Sampler.

- Procure 6,903 ACADAs and 300 M279 Surface Samplers for the Army.

- Continue fielding and engineering support of ACADA.
- Continue fielding support of Ship ACADA.



Program Description

Using active Light Detection and Ranging (LIDAR) technology, the Artemis will be a real-time, standoff detection system for chemical agent contamination monitoring and avoidance, as well as for dewarning and indicating areas for decontamination. The use of a standoff system allows for advance warning of a chemical agent attack. The system will detect chemical agent aerosols, vapor, and surface contamination, and gives precise ranging information. Enhanced early warning from this standoff system will allow the warfighter to avoid contaminated areas or don full protective equipment if avoidance is not possible, thus maximizing the warfighters ability to complete the mission.

FY00 Accomplishments

- Initiated Analysis of Alternatives (AoA) and Concept Exploration (CE).

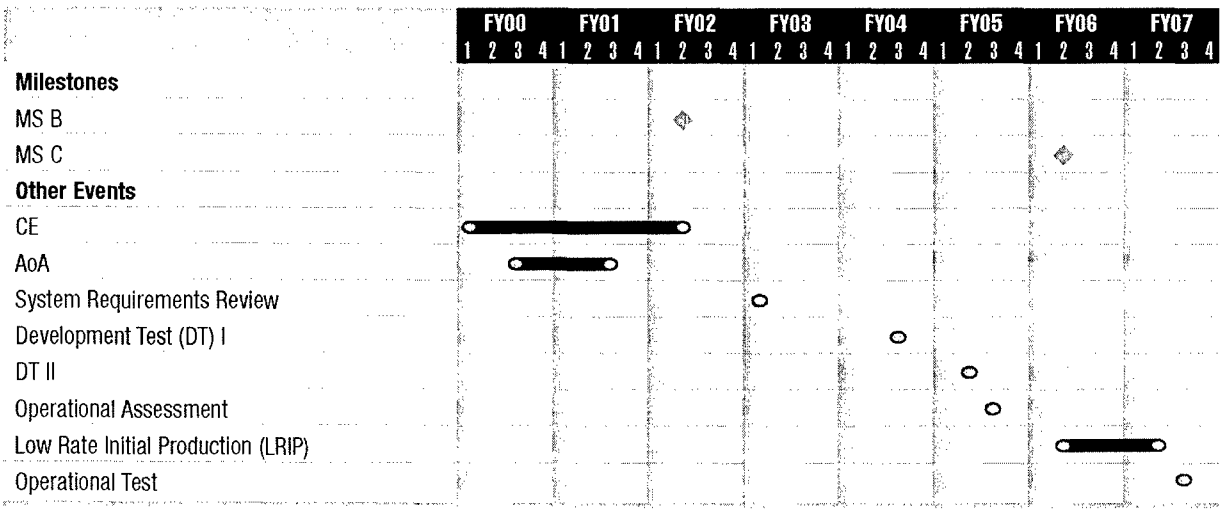
FY01 Plan/Status

- Continue CE and complete AoA.

FY02 Objectives

- Complete performance specification and update the Acquisition Strategy, Acquisition Plan, Acquisition Program Baseline, and Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance Support (C4ISR) Plan. Finalize and issue Request for Proposal (RFP), conduct source selection for prototype development contractor, conduct Alternative Systems Review of draft system work breakdown structure, preliminary functional baseline, and draft system specification.
- Finalize Systems Architecture and Systems Specification through a Joint Systems Engineering Integrated Product Team (IPT).
- Update Simulation Based Acquisition Strategy and Simulation Support Plan to identify the effective use of modeling and simulation throughout the system life cycle. Update/validate the virtual prototype model to support design of early prototype system. Evaluate infrared spectra scene generator equipment in support of virtual testing.
- Conduct, as an integral part of the systems engineering process, a supportability analysis. Conduct initial Joint Training Planning Process Methodology and develop initial Joint System Training Plan. Develop acquisition logistics support plan for Milestone (MS) B through a Joint Logistics/Product Support IPT.
- Develop test methodology in support of the test strategy and finalize initial Test & Evaluation Master Plan for MS B through a Joint Test & Evaluation IPT.
- Further mature key components of a solid state LIDAR system to develop a system architecture and to reduce overall programmatic risk by utilizing Advanced Component Development.

FY02 Acquisition Phase: System Development and Demonstration Phase



Lead Service

- **Semi-automated biological agent detection/identification suite mounted on a dedicated heavy High Mobility Multipurpose Wheeled Vehicle (HMMWV)**
- **Utilizes multicomplimentary bio-detection technologies**

- 38 BIDS NDI systems 310th Chemical Co. (USAR)
- 3 BIDS NDI systems 100th Training Co. (USAR)
- 38 BIDS P3I systems 7th Chemical Co. (USA)
- 7 BIDS P3I systems U.S. Army Chemical School
- 38 BIDS P3I systems 13th Chemical Co. (USA)

Contractors:

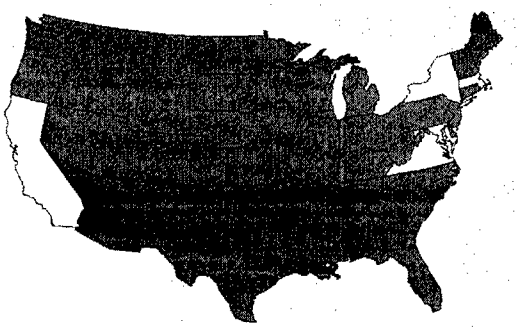
Bio Road
HERCULES, CA

Bruker Analytical Systems
BILLERICA, MA

Environmental Technologies Group
BALTIMORE, MD

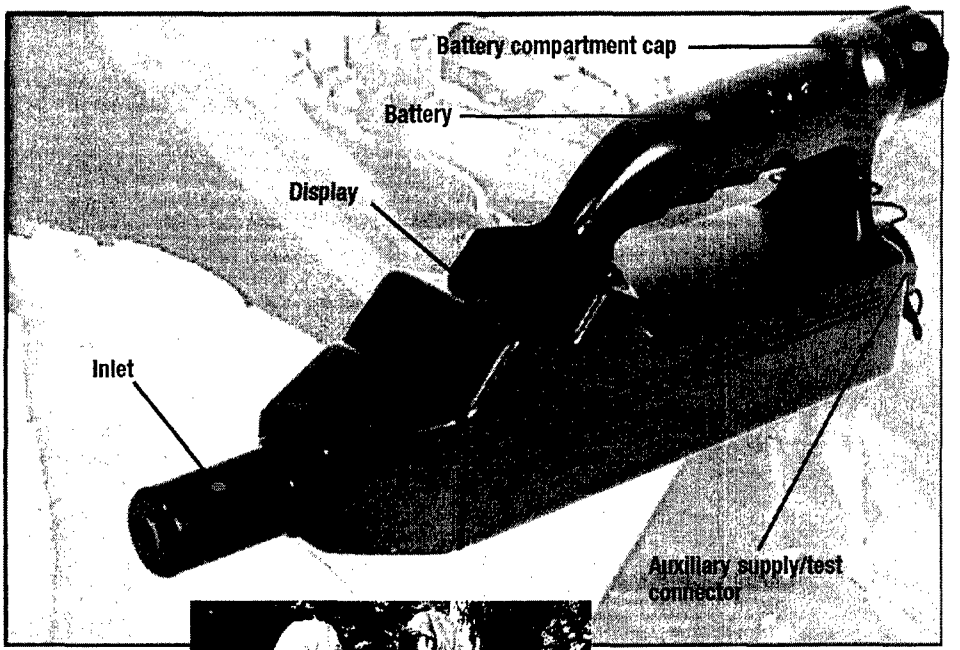
Harris, Corp.
ROCHESTER, NY

Marion Composites
MARION, VA



Lead Service

- Hand-held, real-time, low-level detector of nerve and mustard vapors
- Capable of day and night operation
- NBC contamination survivable



Contractors:

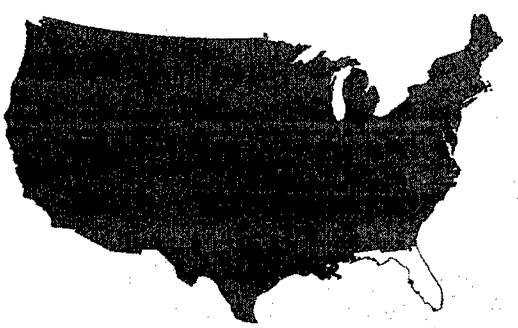
ICAM

Intellitec
DE LAND, FL

Graseby Ionics, Inc.
UNITED KINGDOM (ROYALTIES)

ICAM Training Simulator

Argon Electronics
LUTON, BEDFORDSHIRE, UK



Program Description

The ICAM is a hand-held device for monitoring chemical agent contamination on personnel and equipment. The ICAM detects vapors from chemical agents on the surface by sensing the molecular ions of specific mobilities (time-of-flight). It uses special timing and microprocessor techniques to reject interference and false alarms. The ICAM detects and discriminates between vapors of nerve and mustard agents. It identifies and provides a positive indication of specific areas and relative levels of contamination. The ICAM consists of a drift tube, electronics board, molecular sieve, vacuum pump, and buzzer. It includes expendables such as batteries, a battery pack, test simulant, and dust filters. The ICAM weighs five pounds and measures 4"x 7"x15". The ICAM, an NDI, upgrades the CAM by significantly improving reliability and maintainability. Prototypes were procured and tested under the Foreign Comparative Test (FCT) program in FY 91 through FY 93 and the ICAM was type classified, Standard in Aug 93.

FY01 Accomplishments:

- Procured 3,716 ICAM: (Includes Guard and Reserve funding)
  - Army 2,984
  - Navy 390
  - National Guard 342
- Procured 233 ICAM Training Simulators:
  - Army 52
  - Air Force 70
  - National Guard 111

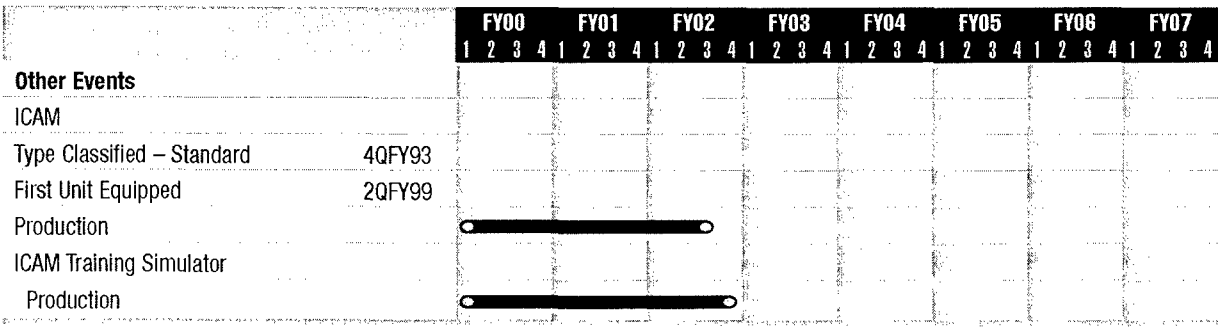
FY02 Objectives:

- Procure 3,100 ICAM: (Includes Guard and Reserve funding)
  - Army 3,003
  - National Guard 97
- Procure 136 ICAM Training Simulators:
  - Army 23
  - Air Force 33
  - Marine Corps 60
  - National Guard 20

FY03 Objectives:

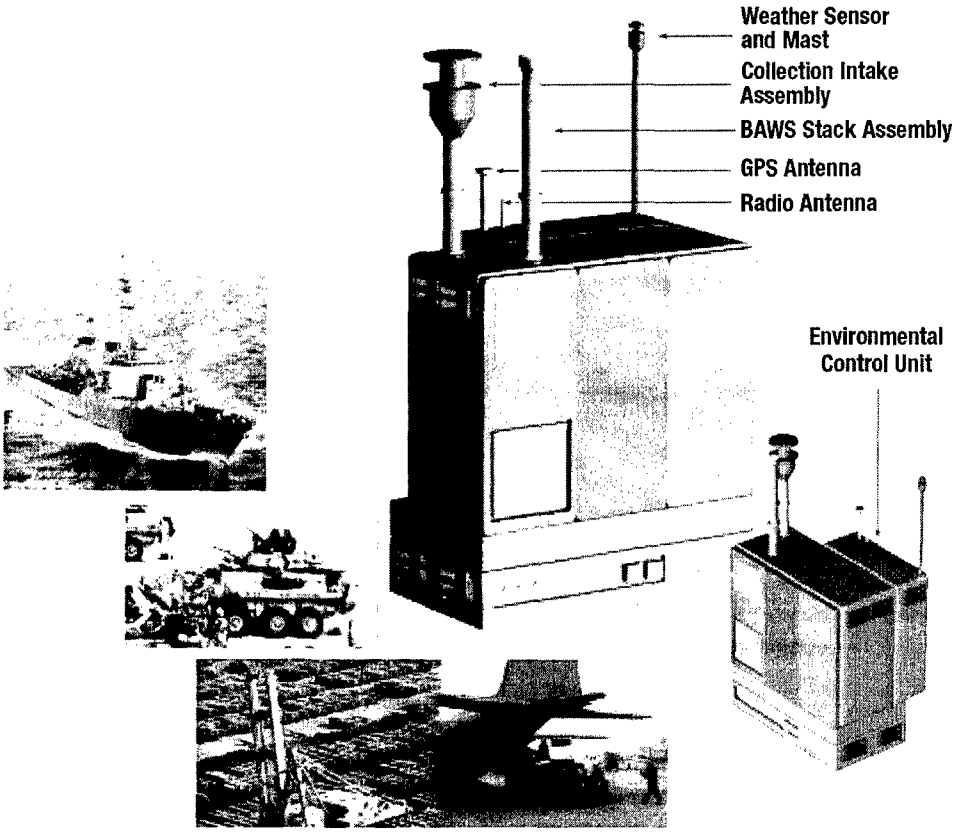
- Receive production deliveries and conduct fielding.

FY02 Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Lead Service

- Provides common biological agent point detection capability for Service platforms
- Provides automated knowledge-based detection and identification
- Identifies biological agents in less than 15 minutes
- Provides a point detection capability to the Air Force and Marine Corps
- Replaces Navy Interim Biological Agent Detector (IBAD) and Army Biological Integrated Detection System (BIDS)



Contractors:

Battelle Memorial Institute
COLUMBUS, OH

Lockheed Martin Librascope
GLENDALE, CA

Program Description

The Joint Biological Point Detection System (JBPDS) is the successor to the Army BIDS, Navy IBADS, and the Air Force service specific development programs. The JBPDS will meet Quad-service requirements as outlined in the Joint Operational Requirements Document (JORD) and consist of complementary trigger, sampler, detector and identification technologies to rapidly and automatically detect and identify biological threat agents. The suite will be capable of identifying multiple BW agents in less than 15 minutes. The detection suite will be integrated into each Service's platforms (e.g., vehicles and surface ships) air bases and ports to provide a common detection capability for joint interoperability and supportability. The JBPDS will increase the number of agents that can be identified, decrease detection and identification time, increase detection sensitivity, provide automated knowledge-based detection and identification, and provide a first-time point detection capability to the Air Force and Marine Corps.

FY96 Accomplishments

- Completed Engineering Design Test (EDT) and Production Qualification Test/Operational Assessment (PQT/OA) in order to enter Low Rate Initial Production (LRIP).
- Completed documentation requirements necessary for Integrated Logistics Support (ILS).
- Conducted Joint Field Trial 6 open air evaluation of detectors at Defence Research Establishment, Suffolk, Canada and Dugway Proving Ground, Utah.
- Integrated Generic UV Detection capability (BAWS) improving system performance while significantly reducing operation and support costs.

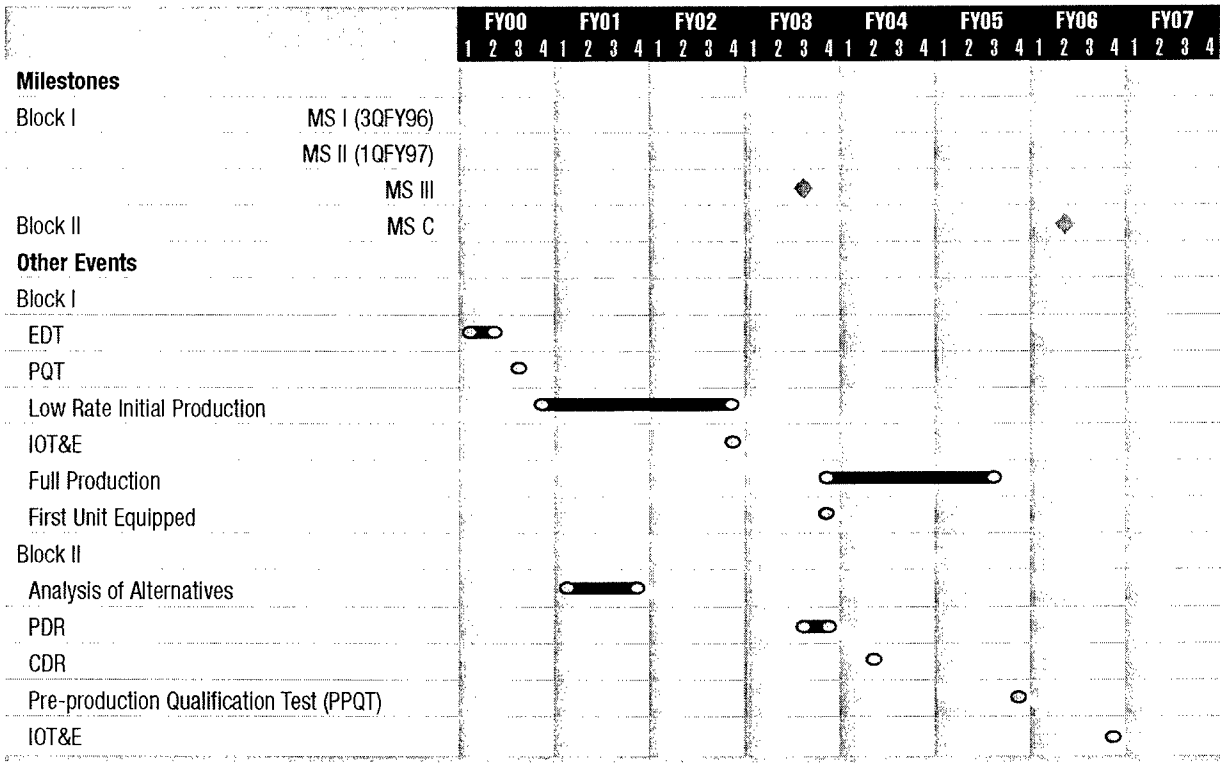
FY97 Plans

- Procure Block I Low Rate Initial Production (LRIP) for OA II.
- Conduct First Article Test
- Conduct OA II on Block I LRIP Phase I units.
- Initiate Block II design studies to define performance specifications. Identify potential design concepts, and reduce risk.

FY98 Plans

- Procure Block I LRIP Phase II for IOT&E.
- Initiate development of Block II algorithms allowing enhanced discrimination of background environmental aerosol components.

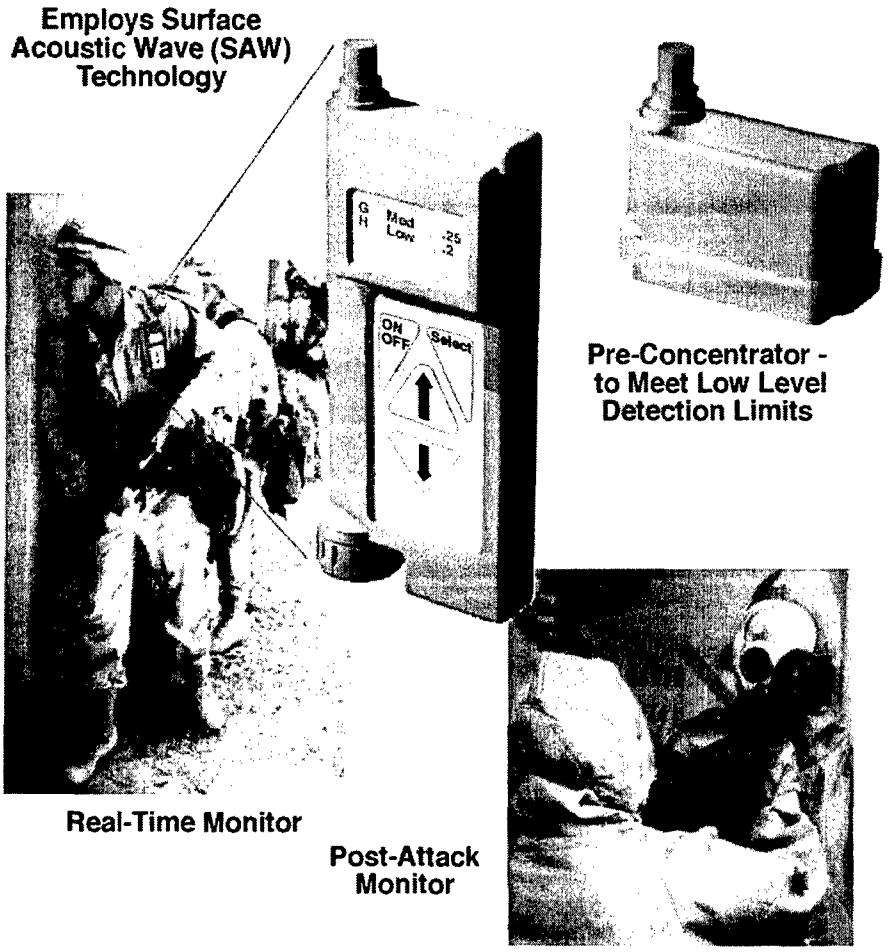
FY97 Acquisition Phase: Engineering and Manufacturing Development



Joint Chemical Agent Detector (JCAD)

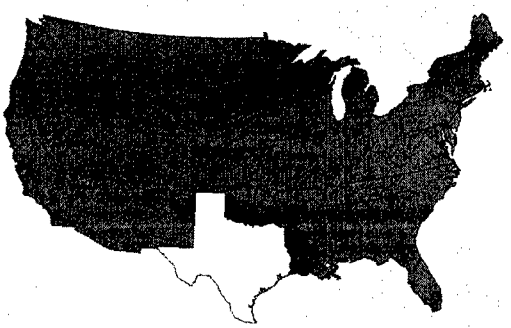
Lead Service

- Automatically detect, identify, and quantify chemical agents
- Lightweight and portable
- Interface with Joint Warning and Reporting Network (JWARN)
- Replace service unique chemical agent detectors



Contractors:

BAE
AUSTIN, TX



Program Description

The JCAD program will develop a joint portable monitoring and small point chemical agent detector for aircraft, shipboard and individual warfighter applications. JCAD is a hand-held, pocket-sized detector capable of automatically detecting, identifying, and quantifying chemical agents onboard ships and aircraft. It provides monitoring and alarm capabilities to the warfighter. The device must be sufficiently sensitive to warn personnel before accumulation of an operationally significant dose, over the entire mission. The JCAD will be resistant to the severe interferents found in an operational environment.

Major Accomplishments

- Conducted Critical Design Review (CDR).
- Completed unit-specific integration on the Phase I prototypes and continued systems integration planning for Phase II final production units.
- Completed JCAD Phase I prototype testing and evaluation.

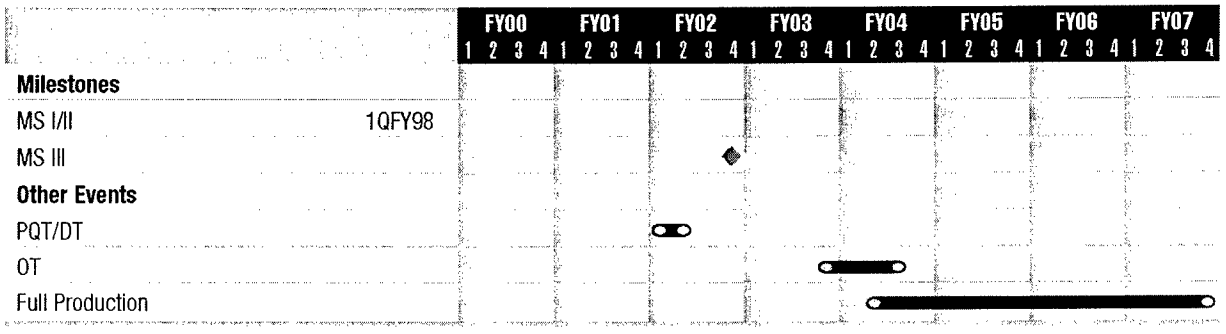
FY99 Efforts

- Continue systems integration planning for Phase II final production units.
- Continue integration of systems for Operational Testing (OT) and evaluation.

FY00 Plans

- Conduct Production Qualification Test/Development Test (PQT/DT) and OT.

FY98 Acquisition Phase: Engineering and Manufacturing Development



Lead Service

- NBC detection and identification system
- Provides accurate and rapid NBC intelligence data by sampling, detecting, identifying, marking, and reporting the presence of NBC hazards within a unit's area of responsibility
- Consists of a Base Vehicle equipped with hand-held, portable and mounted, current and advanced NBC detection and identification equipment
- Equipped with a collective protection system, environmental control system, auxiliary power supply system, navigation system, meteorological data processing system, internal and external communication systems, and surface samplers
- Configured to allow full operation while deployed with the standard warning and reporting system and with vehicles now assigned to the receiving units

LAV Variant

HMMWV Variant

Contractors:

TRW (Tactical Systems Division)
CARSON, CA

The JSLNBCRS is an NBC detection and identification system. It will consist of a Base Vehicle (BV) equipped with hand-held, portable and mounted, current, and advanced NBC detection and identification equipment; the vehicle shall be equipped with collective protection, an over-pressure system, environmental control system, auxiliary power supply system, navigation system, meteorological data processing system, internal and external communication system, and surface samplers.

The JSLNBCRS shall provide on-the-move reconnaissance and surveillance in support of combat, combat support, and combat service support forces. The JSLNBCRS shall provide accurate and rapid NBC intelligence by detecting, sampling, identifying, marking, and reporting the presence of NBC hazards within the unit's area of responsibility. There are two variants of the JSLNBCRS: the High Mobility Multipurpose Wheeled Vehicle (HMMWV) variant and the Light Armored Vehicle (LAV) variant.

The BV provides the mobility for the NBC equipment suite and the crew. The NBC equipment suites for both variants consists of the following components mounted on or contained in the BV:

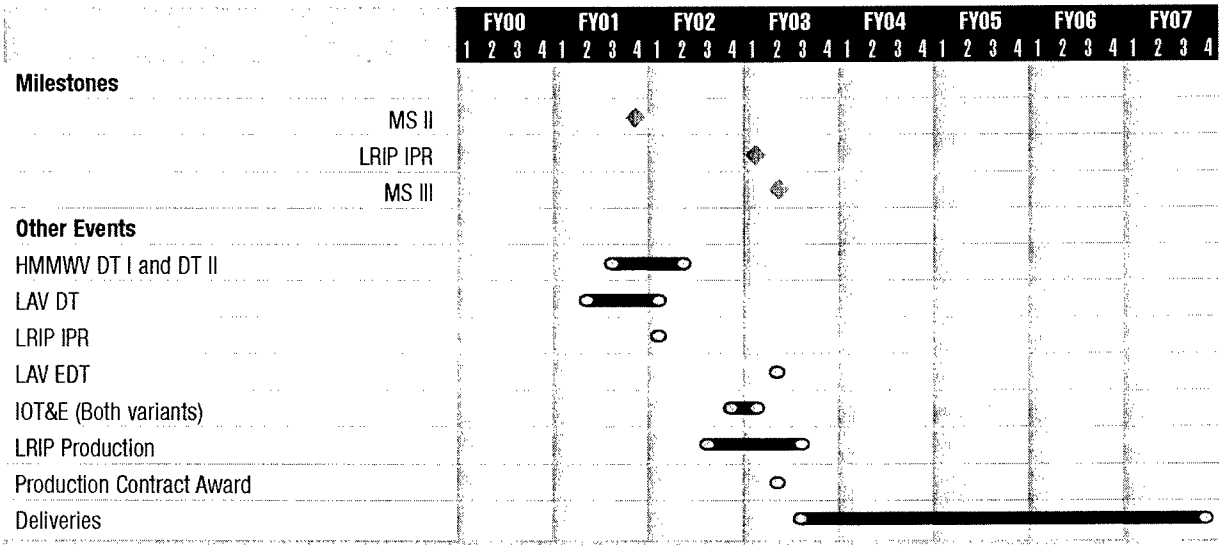
- NBC sensors: radiation detector, stand-off chemical agent detector, chemical agent detector, chemical vapor detector, surface contamination sensor.
- Central Data Processing Unit (CDPU): computational hardware, integrated general and application software.
- Input/output interface to CDPU: mass spectrometer, NBC sensors, navigation system, meteorological detection system, communications systems (internal and external), printer, commander's/operator's display devices.

Consumables: detection kits, sampling kits, contamination markers, surface contamination elements.

- Continued integration of HMMWV variant.
- Began Developmental Test (DT) and prepared initial Technical Data Package for HMMWV variant.

- Integrate LAV variant.
- Complete HMMWV variant DT and start Limited User Test (LUT).
- Conduct Critical Design Review (CDR) for LAV variant.

- Conduct DT II for HMMWV variant.
- Complete LUT.
- Initiate initial Operational Test and Evaluation (IOT&E) for HMMWV and LAV variants.
- Procure 47 HMMWV and six LAV variants.
- Conduct HMMWV Low Rate Initial Production (LRIP) In-Process Review (IPR).

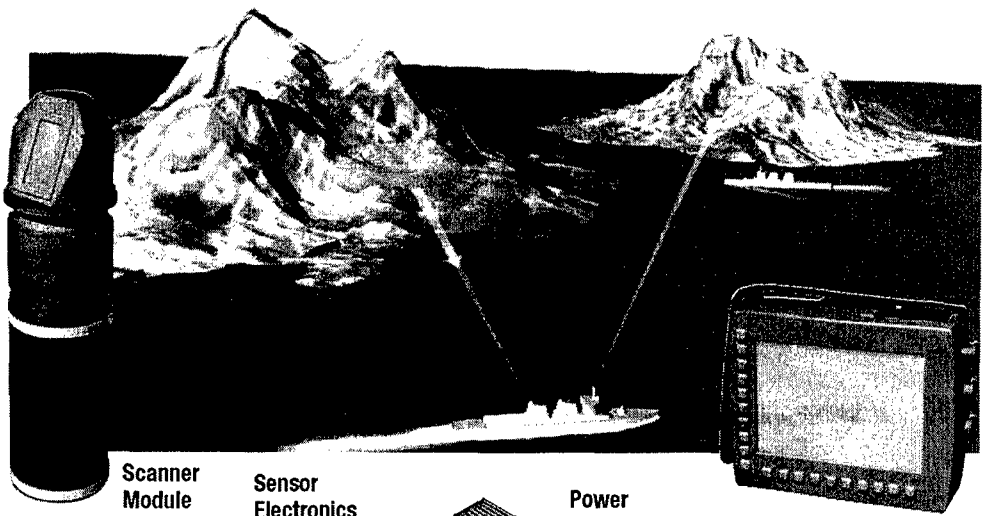


Joint Service Lightweight Standoff Chemical Agent Detector

Lead Service

- Provides on-the-move automatic standoff chemical agent detection up to five kilometers in range
- Mounts on Service platform(s) to include selected naval vessels, aircraft, and fixed sites
- Replaces the M21 Remote Sensing Chemical Agent Alarm (RSCAAL)

Shipboard Configuration
(2 Units per Ship)



Scanner Module

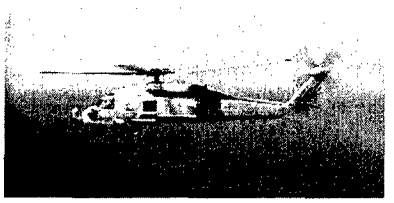
Sensor Electronics Module

Power Adapter

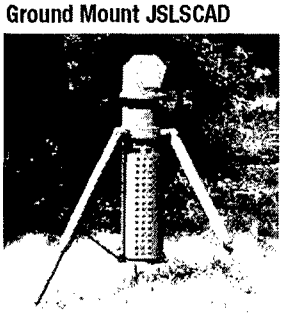
Operator Display Unit

Vehicle Mounted JSLSCAD

Aircraft Mounted JSLSCAD



Ground Mount JSLSCAD



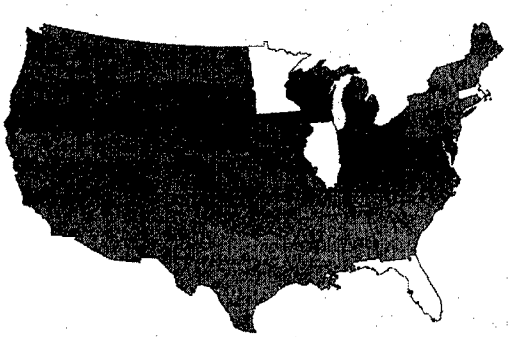
Contractors:

Intelletic
DE LAND, FL

Honeywell Technology Center
MINNEAPOLIS, MN

OPTRA, Inc.
TOPSFIELD, MA

Recon/Optical, Inc.
BARRINGTON, IL



Program Description

The Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD) is a lightweight, passive, standoff chemical agent detector. It is capable of providing up to 360 degrees on-the-move vapor detection from a variety of tactical and reconnaissance platforms at distances up to five kilometers. The JSLSCAD is a second-generation chemical agent vapor detector and improves on the capabilities of the M21 Remote Sensing Chemical Agent Alarm (RSCAAL) first-generation system. Warfighter protection and maneuver unit combat capabilities will be increased with the JSLSCAD. When avoidance is not possible, JSLSCAD will provide extra time for warfighters to don full protective equipment (i.e., Mission Oriented Protective Posture [MOPP] gear).

[illegible]

- Completed fabrication of Engineering Design Test (EDT) units and initiated EDT.
- Conducted Critical Design Review (CDR).
- Completed engineering tests to include environmental, shock and vibration, Electromagnetic Interference, Electromagnetic Pulse, and agent testing.
- Continued integration for Joint Service Lightweight Nuclear, Biological, Chemical Reconnaissance System (JSLNBCRS), CH-53 helicopter, and C-130 fixed wing test platforms.

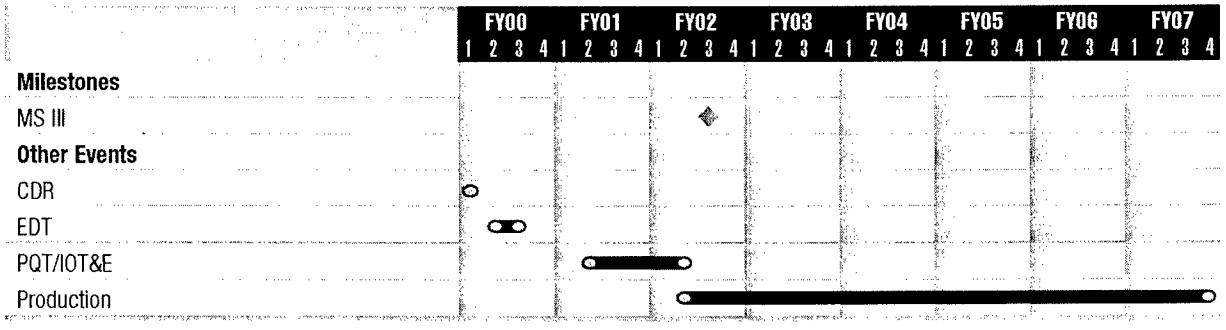
[illegible]

- Complete EDT and incorporate test results into system design.
- Complete integration into JSLNBCRS, CH-53, and C-130.
- Fabricate 40 Production Qualification Testing/Initial Operational Test & Evaluation (PQT/IOT&E) test article and conduct PQT/IOT&E.

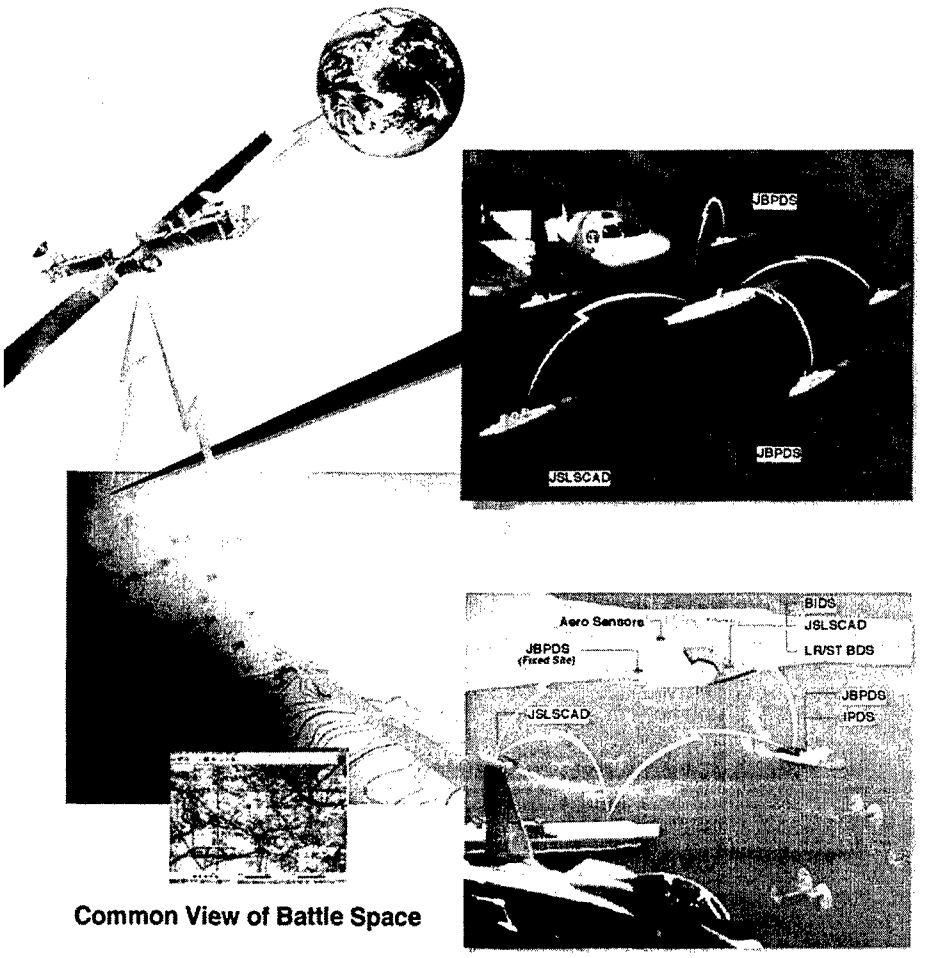
[illegible]

- Procure 40 JSLSCAD for First Article Test (FAT):
  - Army 30
  - Marines 10
- Refurbish 30 PQT/IOT&E units:
  - Army 15
  - Marines 15

[illegible]



Lead Service



Common View of Battle Space

Contractors:

BLOCK I:
Bruhn Newtech
COLUMBIA, MD

BLOCK II:
Sverdrup
DUMFRIES, VA

Program Description

The JWARN will be located in command and control centers at the appropriate level defined in service-specific annexes and will be employed by NBC defense specialists and other designated personnel. JWARN equipment will transfer data automatically from and to the actual detector/sensor and provide commanders and Command, Control, Communications, Computer and Intelligence Information (C4I2) systems with analyzed data for decisions and disseminating warnings down to the lowest level of the battlefield. It will provide additional data processing, production of plans and reports, and access to specific NBC information to improve the efficiency of limited NBC personnel assets.

JWARN is a three phase program:

- Block I Interim Standardization (IS) is the initial procurement and fielding of Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) software to standardize NBC warning and reporting throughout the Army, Navy, Marine Corps, and Air Force.
  - Block Ia: COTS NBC Analysis software for DOS based and GOTS hazard prediction models software.
  - Block Ib: COTS NBC Analysis software with Automated Nuclear, Biological and Chemical Information System (ANBACIS) Battlefield Management functionality for the U.S. Army Maneuver Control System/Phoenix.
  - Block Ic: COTS NBC Analysis software with ANBACIS Battlefield Management functionality for Windows 32-bit environment and GOTS hazard prediction models software.
- Block II Block Upgrade (BU) provides the total JWARN capability by integrating NBC detector systems, NBC Warning and Reporting Software Modules and NBC Battlefield Management software modules into the Services' C4I2 systems.
- Block III Product Improvement Proposal/Program (PIP).

FY99 Accomplishments

- Awarded Engineering and Manufacturing Development (EMD) contract for Block II integration of NBC legacy and future detector systems, and developed NBC warning and reporting modules and battlespace management modules for use by Joint Services C4I2 systems.

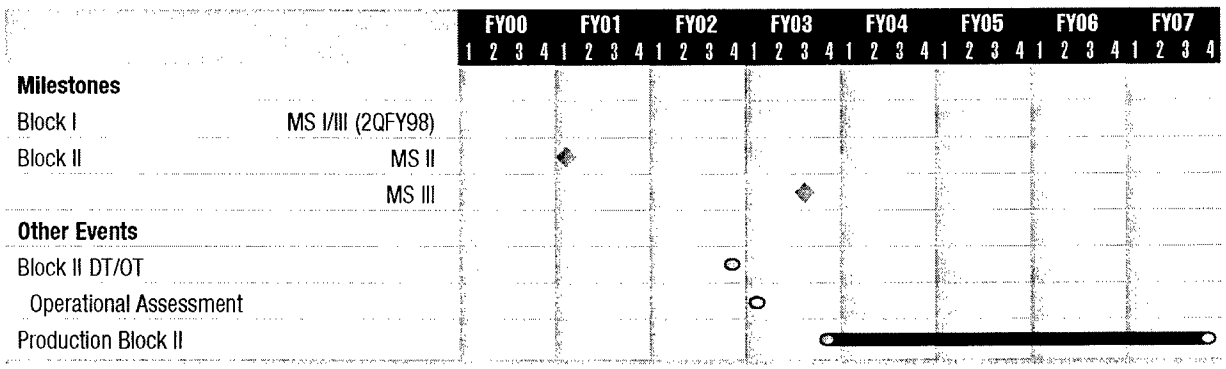
FY00 Objectives

- Continue Block II integration of NBC legacy and future detector systems, and developing NBC warning and reporting modules and battlespace management modules for use by Joint Services C4I2 systems.
- Initiate incremental development of Block II C4I2 software modules and hardware interfaces for legacy and future detector systems.

FY01 Objectives

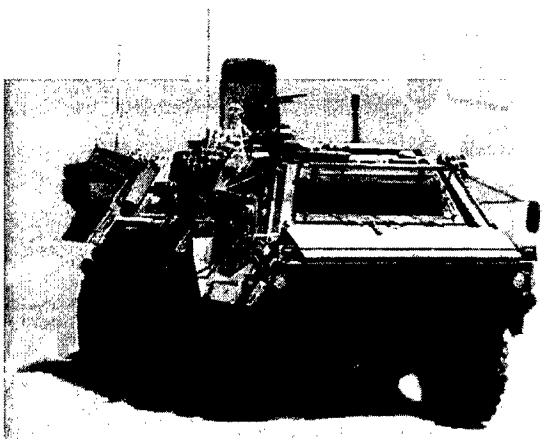
- Continue Block II integration of NBC legacy and future detector systems, and developing NBC warning and reporting modules and battlespace management modules for use by Joint Services C4I2 systems.
- Continue incremental development of Block II C4I2 software modules and hardware interfaces for legacy and future detector systems.
- Prepare integrated logistical support data.
- Conduct Block II modeling and simulation and Test and Evaluation (T&E).

FY00 Acquisition Phase: Engineering and Manufacturing Development



Lead Service

- **High speed, high mobility armored carrier capable of performing NBC reconnaissance throughout the battlefield**



Contractors:

Block I

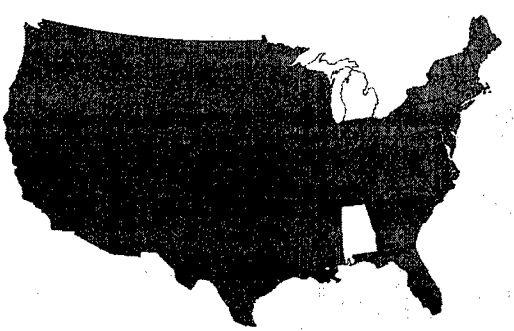
Anniston Army Depot
ANNISTON, AL

General Dynamics Land Systems Division
DETROIT, MI

Henschel Wehrtechnik
GERMANY

Bruker-Franzen
GERMANY

Block II – TBD



Program Description

The M93A1 FOX NBC Reconnaissance System is a dedicated system of Nuclear and Chemical detection and warning equipment, and Biological sampling equipment integrated into a high speed, high mobility armored carrier capable of performing NBC reconnaissance on primary, secondary, or cross country routes throughout the battlefield. The M93A1 is the Block I improvement of the FOX NBCRS Interim System to meet all of the requirements of the approved ROC, to provide organic maintenance, and reduce the crew size to three. The M93A1 FOX NBCRS is capable of detecting chemical contamination in its immediate environment through point detection, and at a distance through a standoff detector (M21 Remote Sensing Chemical Agent Alarm [RSCAAL]). It automatically integrates contamination information from detectors with input from onboard navigation and meteorological systems and automatically transmits digital NBC warning messages through the Maneuver Control System to warn follow-on forces. The NBCRS Block II will have the capability to detect chemical and biological contamination in its immediate environment on the move through point detection (Chemical Biological Mass Spectrometer [CBMS]), and at a distance through a standoff detector (Joint Service Lightweight Standoff Chemical Agent Detector [JSLSCAD]).

FY96 Accomplishments

- Produced three Block I Fox NBCRS training systems.
- Procured 14 Block I systems.
- Installed seven Block I systems.
- Conducted NBCRS suite engineering development for Block II.

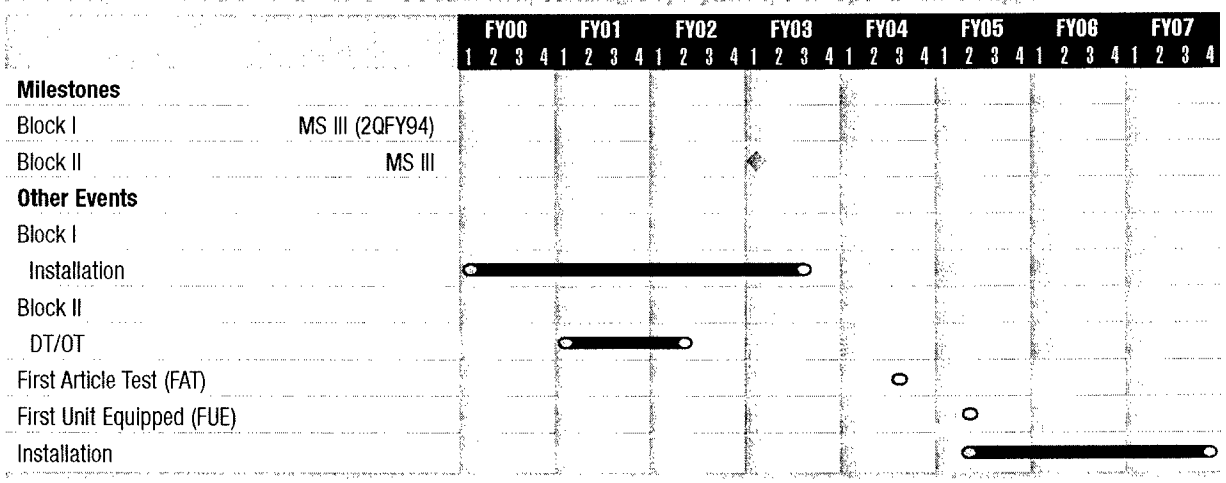
FY97 Objectives

- Procure 21 Block I systems.
- Install 30 Block I systems.
- Initiate plans for Block II Developmental Test and Evaluation (DT&E) and finalize Block II Test and Evaluation Master Plan (TEMP).
- Assemble and integrate developmental detectors into vehicles.

FY98 Objectives

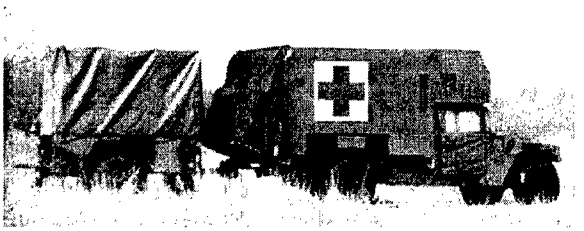
- Install five Block I systems.
- Conduct Block II Modeling and Simulation (M&S) of human factors.
- Continue integration of developmental detectors into vehicles.
- Begin warfighter operational capability assessment for Block II.

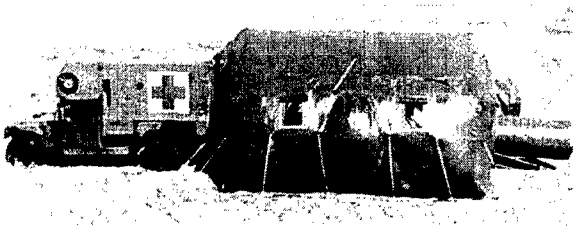
FY96 Acquisition Phase: Block I -- Production, Fielding/Deployment, and Operational Support

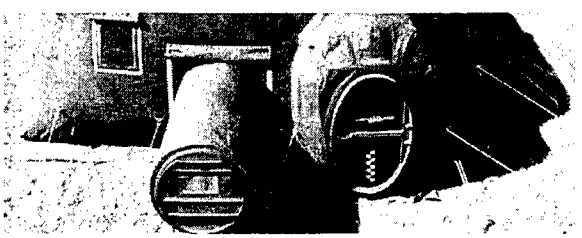


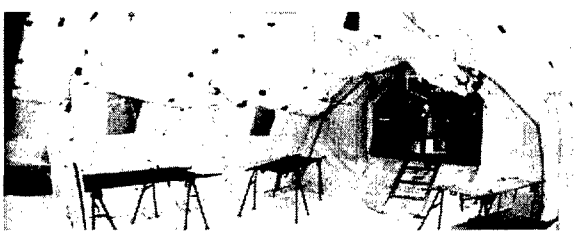
Chemical Biological Protective Shelter (CBPS)

Lead Service









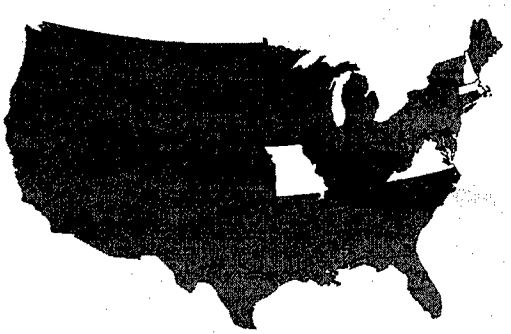
Contractors:

Chemfab Corporation
MERRIMACK, NH

Engineering Air Systems, Inc.
ST. LOUIS, MO (PRIME)

Federal Fabrics - Fibers, Inc.
NORTH CHELMSFORD, MA

Marion Composites
BRUNSWICK, VA



Program Description:

The CBPS is a new system designed to replace the M51 Collective Protection Shelter. It consists of a Lightweight Multi-purpose Shelter (LMS) mounted on a Expanded Capacity (ECV) High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) variant and a 300 square foot airbeam supported soft shelter. The CBPS provides a contamination-free, environmentally-controlled working area for medical, combat service, and combat service support personnel to obtain relief from the continuous need to wear chemical-biological protective clothing for 72 hours of operation. All ancillary equipment required to provide protection, except the generator, is mounted within the shelter. Medical equipment and crew gear are transported inside of the LMS and by a towed High Mobility Trailer.

A CBPS Pre-Planned Product Improvement (P3I) will initiate in FY02. The P3I will result in improved operational suitability and reliability of the current version of CBPS for forward deployed light divisions only. A self-sustained Environmental Support System (ESS) will be developed that does not require the HMMWV engine for primary power. This ESS will reduce vehicle sustainment costs and improve system reliability. Further weight reductions will be incorporated to allow more medical equipment to be carried onboard the CBPS. The P3I also will develop versions of CBPS suitable for airdrop and use in heavy divisions. The self-sustained ESS and CBPS airbeam supported soft shelter will be integrated onto platforms suitable for those applications.

FY00 Accomplishments:

- Conducted Limited User Test and Evaluation (LUTE).
- Conducted Reliability, Availability, Maintainability (RAM) testing.

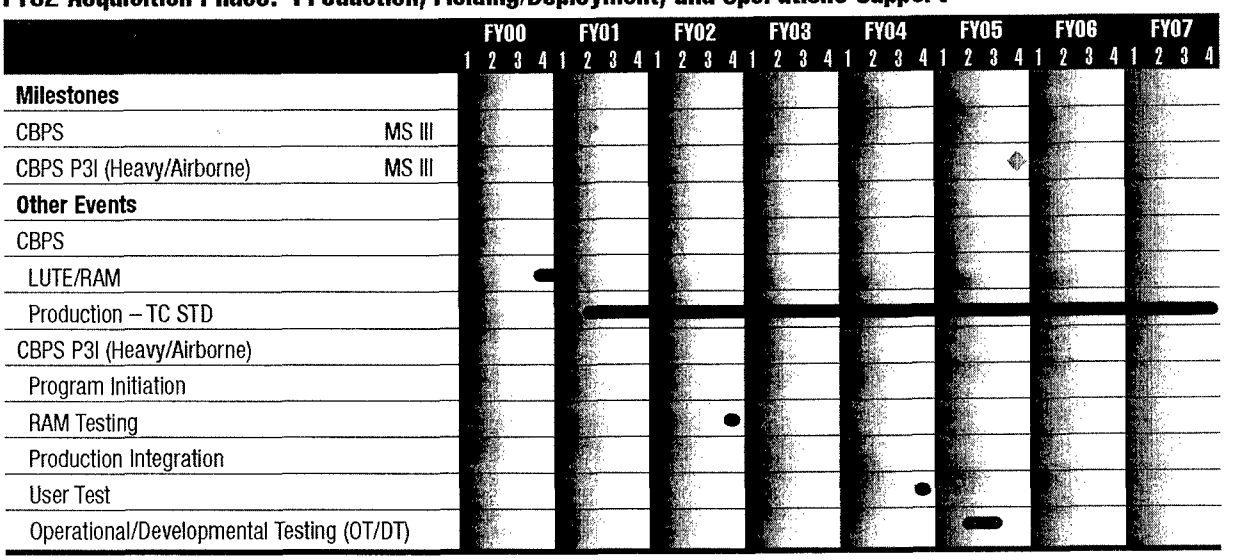
FY01 Objectives:

- Type Classification (TC) for Service standard (STD) use.
- Procure 22 CBPS and associated equipment.

FY02 Objectives:

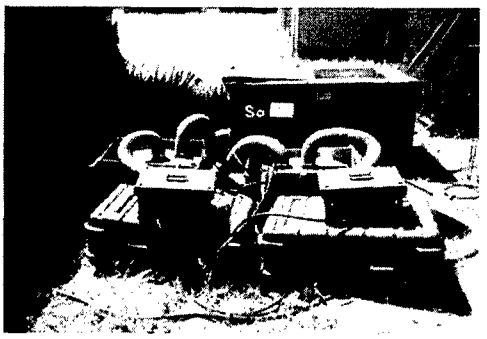
- Procure 32 CBPS and associated equipment.
- Initiate CBPS P3I program.
- Develop CBPS P3I design concept for airborne and heavy versions.
- Develop a CBPS P3I ESS that will meet the requirements for CBPS-light, heavy, and airborne versions.
- Conduct initial performance and RAM testing for CBPS P3I ESS.

FY02 Acquisition Phase: Production, Fielding/Deployment, and Operations Support

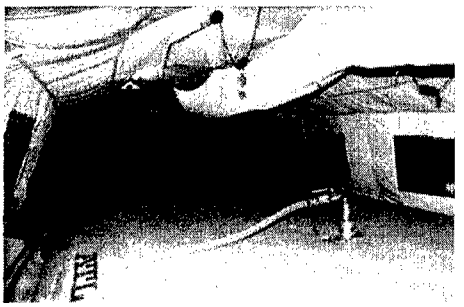


Chemically Protected Deployable Medical System (CP DEPMEDS)

Lead Service



CB hardened environmental control unit with M28 chemical filters and blowers



CB hardened water distribution system

CHATH

CP DEPMEDS

Pressure gauge with differential pressure alarms

CB hardened latrines

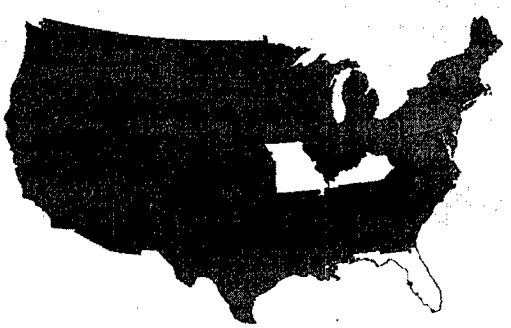
Patient Processing Unit (PPU)

Contractors:

Engineering Air Systems, Inc.
St. Louis, MO

Intellitec
De Land, FL

Keco Industries, Inc.
Florence, KY



Program Description:

The CP DEPMEDS/Chemically Hardened Air-Transportable Hospital (CHATH) provides a capability that allows field combat support hospitals to be able to sustain medical operations in a CB environment. The CP DEPMEDS will provide a clean, toxic-free, environmentally-controlled patient treatment area maximizing the use of existing equipment to the Hospital Unit Base of fielded Deployable Medical Systems for the Army and to CHATH for the Air Force. The program is a multi-service effort between the Army and Air Force. All services use field hospitals which are comprised of the same building block components. Hospitals vary in size and configuration between the services. Collective protection is provided through the addition of M28 Collective Protection Equipment (CPE), CB protected environmental control units and heaters, CB protected latrines and water distribution systems, low pressure alarms and other integration components necessary for a fully operational CB protected hospital facility. All components are designed to integrate into fielded hospitals. mponents will be packaged as a set to be provided to units deploying to threat areas. The CP DEPMEDS is installed during set up of the hospital.

FY00 Accomplishments:

- Finalized Supportability Strategy.
- Conducted Initial Operational Test and Evaluation (IOT&E).
- Procured three CP DEPMEDS systems and integrate into field hospitals.

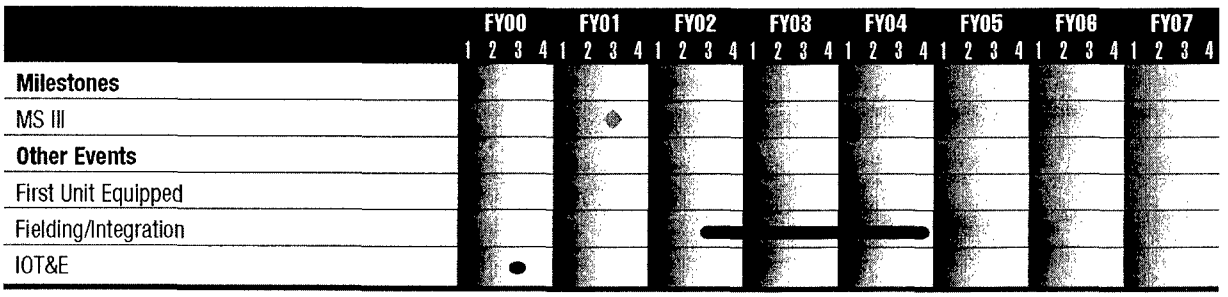
FY01 Objectives:

- Procure eight CP DEPMEDS systems and integrate into field hospitals.

FY02 Objectives:

- Procure three CP DEPMEDS systems and integrate into field hospitals.

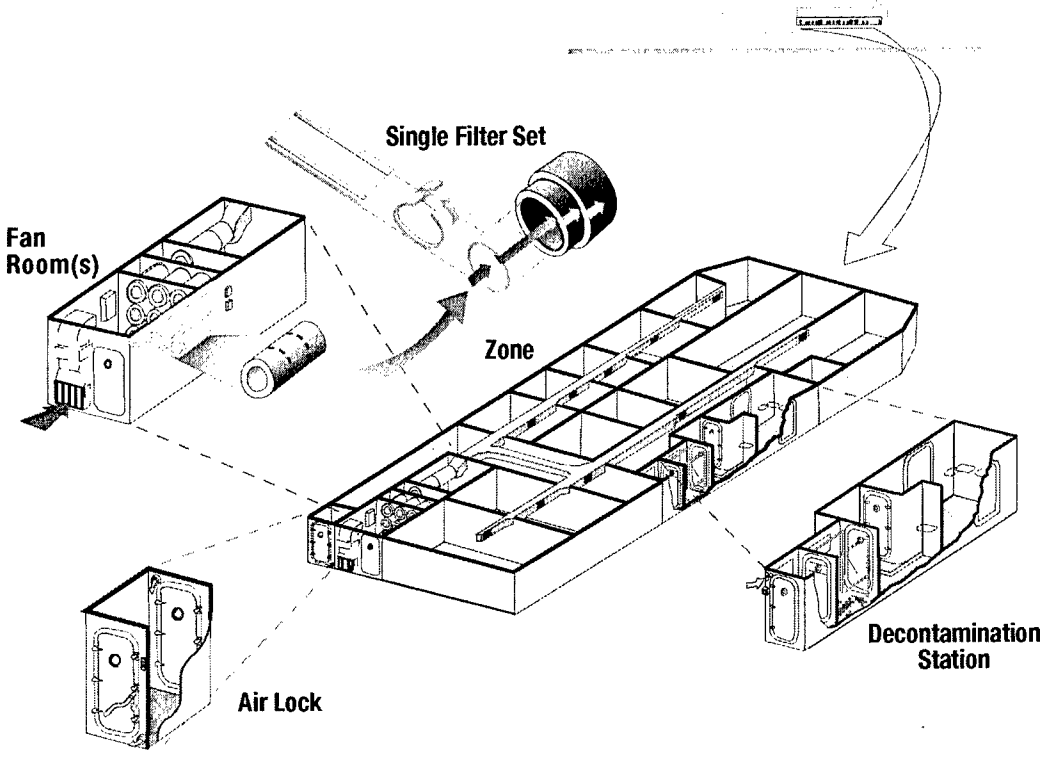
FY02 Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Collective Protection System (CPS) Backfit/ Shipboard Collective Protective Equipment (SCPE)

Lead Service

- Provides ships with a contamination-free environment within specified zone boundaries
- Enables mission-essential operations and life-sustaining functions that can be performed during and after a CB attack
- Provides Pre-Planned Product Improvements (P3I) to the current shipboard Collective Protection System (CPS)/Selected Area Collection Protection System (SACPS) by decreasing logistics costs, extending filter life, reducing shipboard maintenance requirements, and providing energy-efficient fans



Contractors:

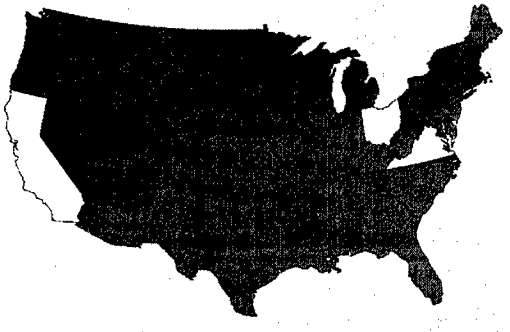
New Philadelphia Fan Company
NEW PHILADELPHIA, OH

New World Assoc., Inc.
FREDERICKSBURG, VA

Science & Technology Research
DAHLGREN, VA

Various Shipyard Contractors
NORFOLK, VA

Various Shipyard Contractors
SAN DIEGO, CA



Program Description:

The CPS Backfit program provides an NBC free environment within specified zone boundaries of high priority ships by providing overpressurization with filtered air.

The SCPE program goals are to extend the service life of shipboard High Efficiency Particulate Air (HEPA) filters. Current efforts are focused on extending the service life from three years to four years. The program will continue testing of collective protection system components that decrease Total Ownership Costs (TOC), reduce shipboard maintenance requirements, and provide energy-efficient equipment.

FY00 Accomplishments:

- CPS Backfit – Install hardware on four Landing Helicopter Dock (LHD) class ships and one Landing Helicopter Assault (LHA) class ship.
- SCPE – Developed and tested nine V-cell limited protection (LP) HEPA filters.
- SCPE – Completed first year of verification testing to validate the four-year performance of 34 improved pre-filters and 66 improved HEPA filters.

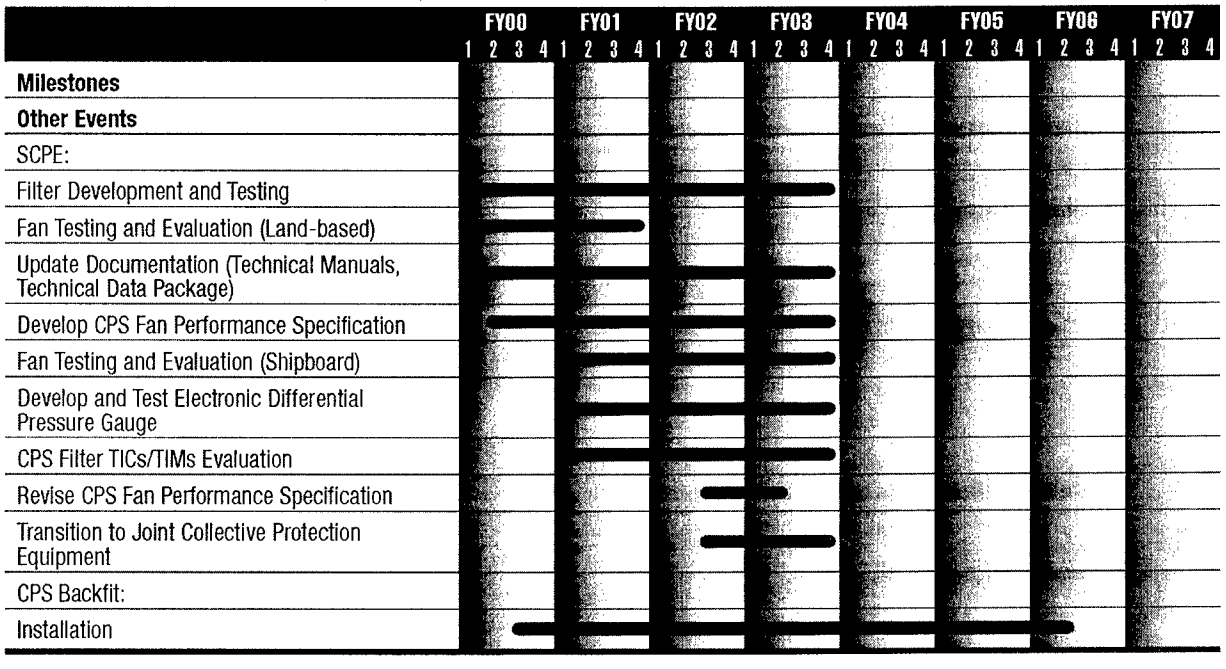
FY01 Objectives:

- CPS Backfit – Install hardware on six LHD class ships.
- SCPE – Complete land based testing and initiate shipboard testing of improved CPS fan.
- SCPE – Complete second year of verification testing to validate the four-year performance of improved pre-filters and HEPA filters.

FY02 Objectives:

- CPS Backfit – Install hardware on ten LHD class ships.
- SCPE – Continue shipboard testing of improved CPS fan.
- SCPE – Complete third year of verification testing to validate the four-year performance of improved pre-filters and HEPA filters.
- SCPE – Continue evaluation of potential HEPA filter performance degradation after toxic industrial chemical/material (TIC/TIM) exposure.

FY02 Acquisition Phase: Production, Fielding/Deployment, and Operational Support – CPS Backfit/ Engineering and Manufacturing Development – SCPE



Joint Protective Aircrew Ensemble (JPACE)/ Joint Service Aircrew Mask (JSAM)

Lead Service

- Increased chemical agent protection
- Increased service life
- Reduced thermal burden
- Coordinated program development

JPACE

JSAM

Contractors:

JPACE
TBD
JSAM
TBD

Program Description:

JPACE: A Joint improved CB protective ensemble for aircrew to replace the Navy Mk1 undergarment, Army ABDU-BDO system, and Air Force CWU-66/P Overgarment. JPACE will provide aviators with improvements in protection, reduced heat stress in CB environments, and extended wear and service life. This operational capability will support all Services.

JSAM: The JSAM will be a lightweight, CB protective mask which can be worn as CB protection for all aircrews. When integrated with anti-G protection, it will provide simultaneous CB and anti-G protection to aircrew in high performance aircraft. It will be compatible with existing CB ensembles, provide flame and thermal protection, reduce heat stress imposed by existing CB protective masks and the CB protective portion will be capable of being donned and doffed in flight. JSAM must also be compatible with existing aircrew life support equipment.

FY00 Accomplishments:

- JPACE – Identified performance specifications for system, materials, and component leveraging other complementary programs such as Joint Service Lightweight Pre-planned Product Improvement (JSLIST P3I).
- JPACE – Completed baseline Developmental Testing (DT) I of current aviation systems to quantify requirements that were identified with respect to current systems for obtaining information for development of pattern designs.
- JSAM – Initiated JSAM baseline testing of filter and Smartman and prepared Program Definition and Risk Reduction (PDRR) testing matrix.
- JSAM – Conducted source selection for development contracts.

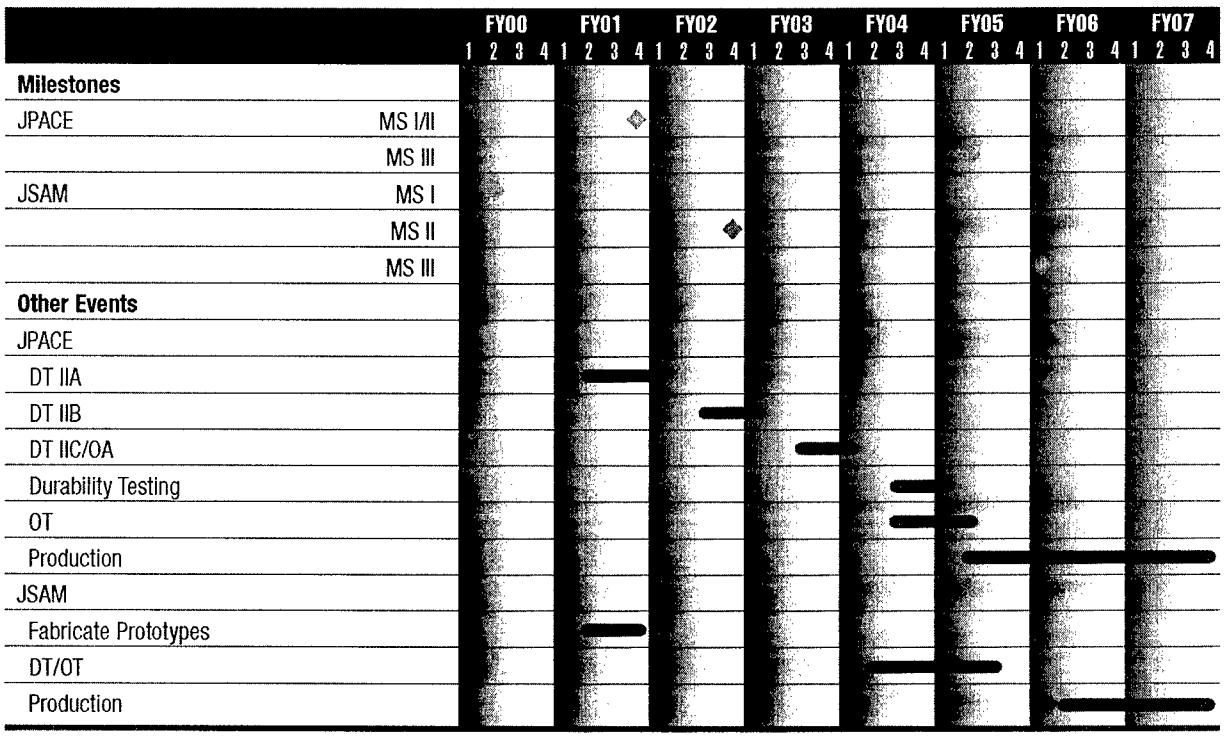
FY01 Objectives:

- JPACE – Obtain 30 candidate materials for DT IIA and initiate DT IIA material swatch testing for downselect.
- JPACE – Continue development of patterns for use in fabrication.
- JPACE – Initiate development of program, logistics, and technical documentation to support the development and fielding.
- JSAM – Fabricate 25 prototype of each variant.
- JSAM – Continue risk reduction, system engineering, and Cost As an Independent Variant (CAIV) analysis studies.

FY02 Objectives:

- JPACE – Complete DT IIA material swatch testing and downselect to the best six candidate materials.
- JPACE – Fabricate 75 prototype ensembles of each of the six selected candidate materials for use in DT IIB.
- JPACE – Initiate DT IIB testing on the six candidate materials to verify system level performance requirements have been met.
- JPACE – Complete development of patterns for use in fabrication, and continue developing and updating program documentation.
- JPACE – Complete initial development and qualification testing or prototypes.
- JSAM – Initiate Engineering and Manfacturing Development (EMD) phase and begin formulation of DT/Operational Testing (OT) test plans.

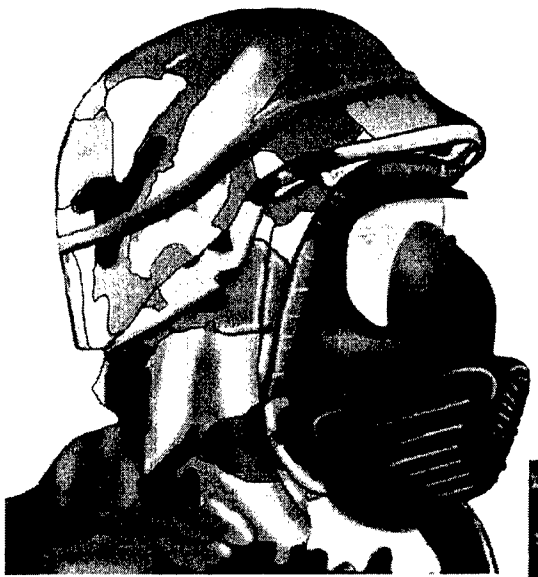
FY02 Acquisition Phase: Engineering and Manufacturing Development



Joint Service General Purpose Mask (JSGPM)

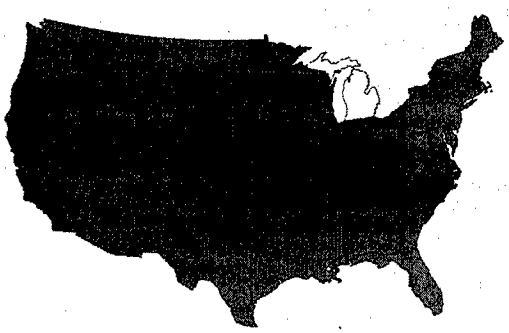
Lead Service

- Improved protection from chemical and biological agents
- Improved field of view
- Lowered breathing resistance
- Reduced weight/bulk



Contractors:

Avon, Inc.
CADILLAC, MI



JSGPM

The JSGPM is a lightweight, protective mask system (consisting of mask, carrier, and accessories) incorporating state-of-the-art technology to protect U.S. forces from anticipated threats. The mask's components will be optimized to minimize their impact on the wearer's performance and to maximize its ability to interface with future equipment and protective clothing. When combined with other Nuclear, Biological, and Chemical protective equipment, the mask will provide an integrated NBC protective system. Warfighters will wear these protective masks based on threat, operational requirements and mission profiles. The protective mask will allow the operators the flexibility to tailor their protection to the mission based on the threat; thereby, minimizing weight, bulk, and heat stress.

FY00 Accomplishments:

- Prepared documentation for Milestone II, including Test and Evaluation Master Plan (TEMP) and Manpower and Personnel Integration (MANPRINT) Plan.
- Initiated sustainment study for logistic support.
- Awarded developmental contract for production of 250 prototypes.

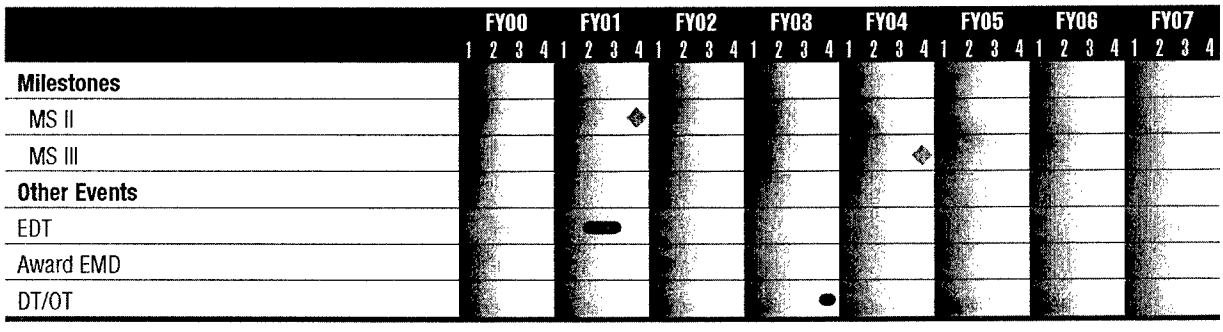
FY01 Objectives:

- Continue sustainment study, development of prototypes and prepare for award of Engineering Manufacturing Development (EMD) contract.
- Conduct Engineering Design Test (EDT).

FY02 Objectives:

- Initiate development Logistics Support Plan (LSP).
- Award EMD contract for development and fabrication of 5,000 prototypes for Developmental Test (DT)/Operational Test (OT).

FY02 Acquisition Phase: Program Definition and Risk Reduction/ Engineering and Manufacturing Development



Joint Service Lightweight Integrated Suit Technology (JSLIST)

Lead Service

- Increases chemical protection for Joint Services
- Reduces heat stress
- Improves fit (reduced bulkiness)
- Extends wear and launderability
- Replaces Battle Dress Overgarment (BDO), Chemical Protective Overgarment (CPO), and Saratoga (USMC Chemical Suit)

Contractors:

Creative Apparel
BELFAST, ME

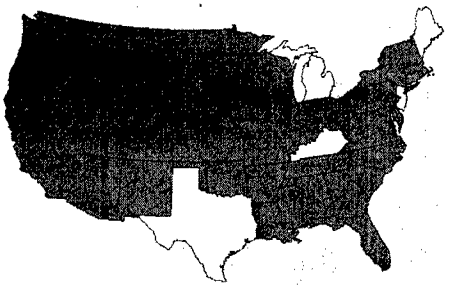
Group Home Foundation (NISH)
BELFAST, ME

NCED (NISH)
EL PASO, TX

Peckham Vocational Industries (NISH)
LANSING, MI

Southeastern Kentucky Rehabilitation Industries (NISH)
CORBIN, KY

Tingley Rubber, Inc.
SOUTH PLAINS FIELD, NJ



Program Description:

The JSLIST ensemble includes:
A single two-piece garment that provides protection from CB contaminants.
Suitability for wear while performing all normal combat operations.
A garment that is lighter and less bulky than previous protective garments; it also imposes less heat stress and reduces the psychological and physiological stress of the current garments.
Compatibility with existing and future garments.
Maximized garment commonality and minimized number of fielded garment types.

The JSLIST ensemble employs a single base garment design, but is configured to meet each service's requirements. The ensemble consists of four components: protective suit, protective overboots, protective gloves, and multipurpose protective socks.

The Chemical Protective Overgarment is a two-piece garment consisting of trousers and coat with an integrated hood and can be worn over undergarment or duty uniform. It provides liquid, vapor, and aerosol protection. Variants may include an Advanced Battledress Overgarment (45 day suit), a lightweight CB protective overgarment (seven day suit), or a vapor protective undergarment.

The Multipurpose Rain/Snow/Chemical/Biological Overboot (MULO) is designed to be worn with standard-issue combat boot or jungle boot while also serving as environmental footwear. It provides maximum foot protection in a CB environment, resists petroleum, oil, and lubricants (POL) and is flame resistant.

The JSLIST Block II Glove upgrade provides protection against liquid, vapor, and aerosol CB agents, is semi-permeable or selectively permeable to prevent excessive moisture buildup and improve user comfort. It is also flame resistant and its performance is not degraded by exposure to POL and field contaminants.

The Multipurpose Protective Sock is designed to be worn over the standard issue sock to provide foot protection from CB agents when worn inside footwear.

FY00 Accomplishments:

- Procured prototype candidate materials for Block I glove.
- Conducted user wear, Developmental Test (DT), and laboratory chemical/biological agent tests.
- Procured 359,166 JSLIST Overgarments and 359,166 pairs of JSLIST boots.

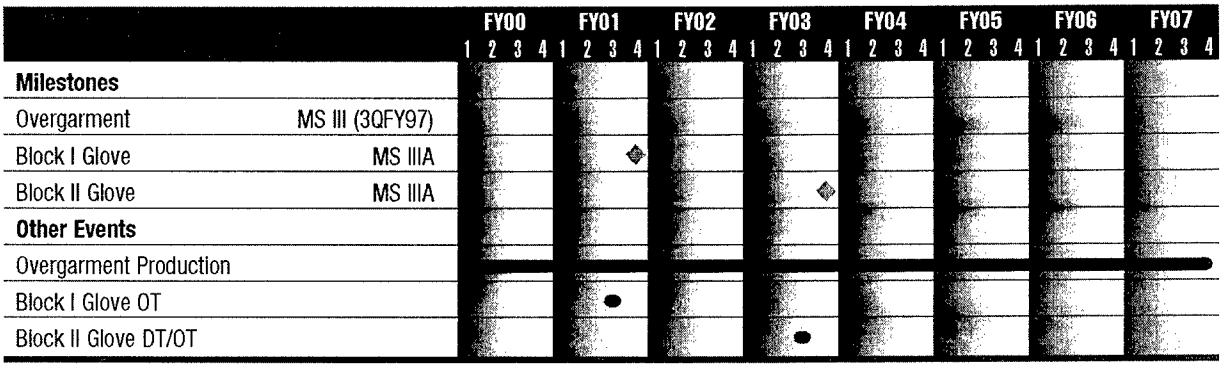
FY01 Objectives:

- Conduct screening and testing of second source material for technology insertion into JSLIST.
- Complete Operational Test (OT) of Block I glove upgrade.
- Procure 371,851 JSLIST Overgarments, 294,710 pairs of JSLIST boots, and 30,000 Interim Aviator Protective Suits.

FY02 Objectives:

- Start engineering and design of an integrated Block II glove for DT/OT to meet air and ground usage requirements in a CB environment.
- Procure 361,024 JSLIST Overgarments, 286,128 pairs of JSLIST boots, and 30,000 Interim Aviator Protective Suits.

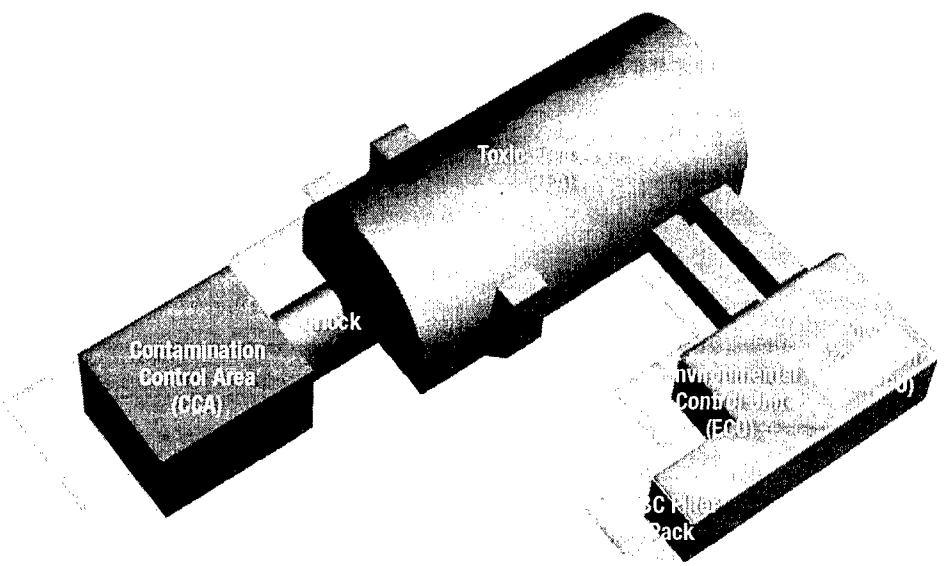
FY02 Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Joint Transportable Collective Protection System (JTCOPS)

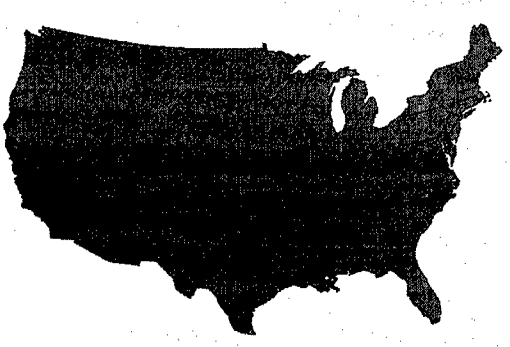
Lead Service

- Protection against chemical and biological agents, toxic industrial materials, and radiological particulate matter
- Use as stand-alone structure or within existing structures
- Ability to process personnel through a contamination control area to a contamination-free area



Contractors:

TBD



Program Description:

The JTCOPS will be a modular shelter system that will provide the ability to process contaminated personnel through a Contamination Control Area into a Toxic Free Area, and will be expandable to meet changing mission needs. It will allow collectively protected vehicles/vans to be connected for safe personnel ingress/egress. The system will include air filtration, environmental control, and power generation elements, and will be capable of using other available generator/power systems.

Block I will develop a new collective protection capability for existing shelters. A competitive contract will be awarded for the design and prototype fabrication phase, with options for Low Rate Initial Production (LRIP) and production. After successful completion of development testing and the Milestone II decision, the LRIP option will be exercised to produce systems for Operational Testing (OT). After completion of OT and the Milestone III decision, the production option of the contract will be exercised. Block II will develop a new, stand-alone collective protection shelter system.

FY00 Accomplishments:

- Prepared program documentation including the Single Acquisition Management Plan, the System Requirements Document, and the Life Cycle Cost Assessment.

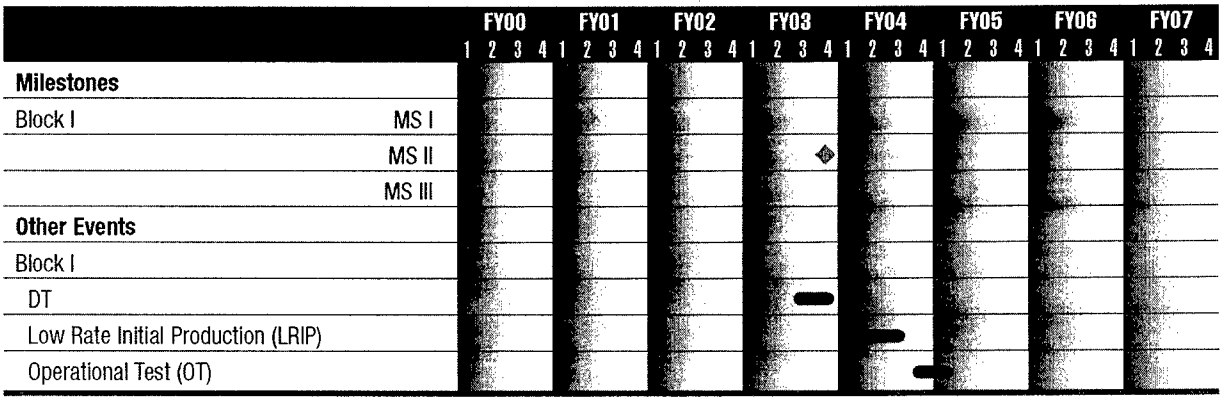
FY01 Objectives:

- Revise the acquisition strategy to a block approach to align the program with user priorities.
- Revise the Milestone I documentation and the development contract Request for Proposals (RFP) for Block I.

FY02 Objectives:

- Award development contract for Block I. Conduct the entire design phase of the contract and begin the prototype fabrication phase.

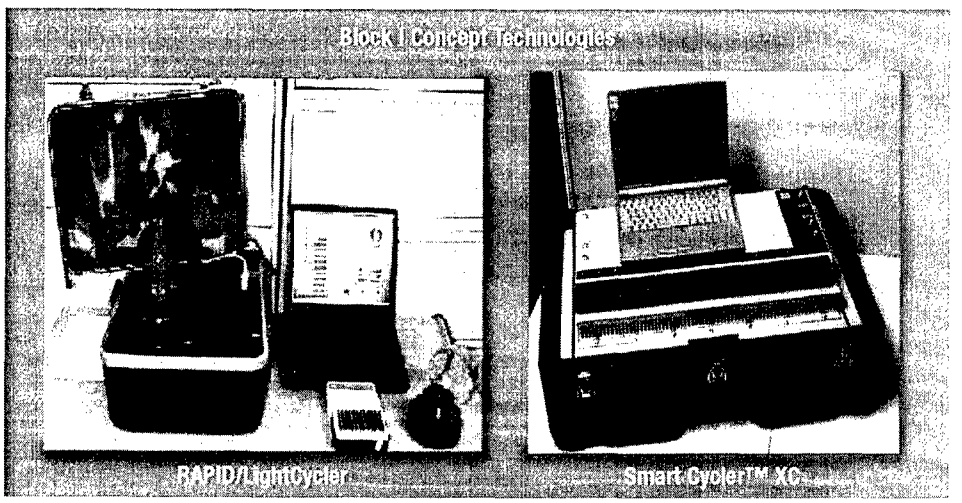
FY02 Acquisition Phase: Program Definition and Risk Reduction



Joint Biological Agent Identification and Diagnosis System

Lead Service

- FDA-approved diagnostic device
- Identifies target biological agents and specifies the concentration in submitted samples
- Capable of simultaneous identification of at least eight BW agents or other biological agents of operational significance in clinical or environmental samples



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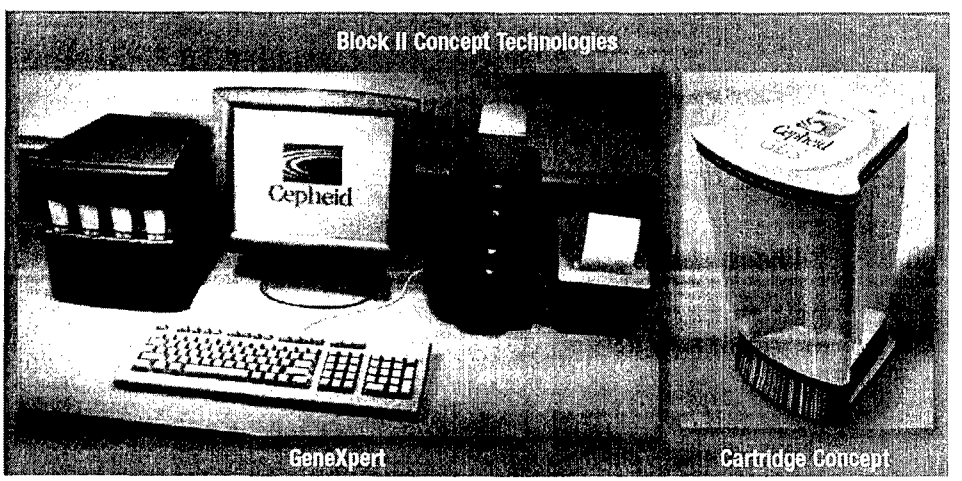


Contractors:

TBD

Program Description:

This project will transition from a Defense Technology Objective (DTO) entitled Common Diagnostic Systems for Biological Threats and Endemic Infectious Diseases. JBAIDS will identify and quantify biological organisms of operational concern and other pathogens of clinical significance for confirmatory and prognostic purposes. JBAIDS will provide U.S. operating forces with a reusable, portable, and modifiable biological organism identification and diagnostic device capable of simultaneous reliable identification of multiple biological organisms. The system will be configured to support deployed medical personnel with the ability to quickly and reliably identify specific biological organisms from clinical and environmental sources and samples. JBAIDS will be operated throughout the combat zone by medical laboratory personnel qualified by the DoD in compliance with the Clinical Laboratory Improvement Act.

JBAIDS is an evolutionary development program. Block I will be a rapid development effort to deliver a critical capability to the field in the shortest time possible. The development effort will focus on the hardening of critical identification technologies. It will also develop and field 8 to 10 gene probes and primers. Block II will focus on the automation of the sample preparation process, reductions in size and weight and reliability as well as toxin diagnosis. It will also develop and field an additional 10 to 16 probes and primers.

FY00 Accomplishments:

- Initiated preparation activities to transition program from TechBase to EMD.

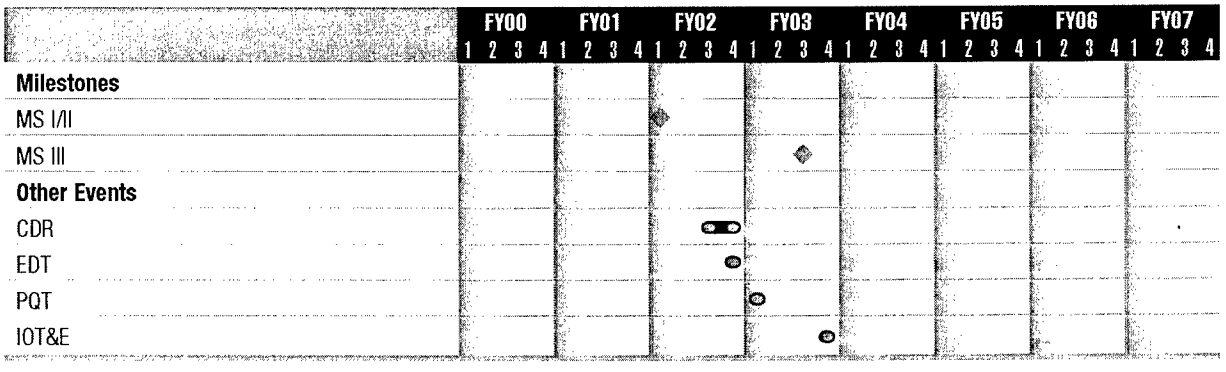
FY01 Objectives:

- Continue preparation activities to transition program from TechBase to EMD.

FY02 Objectives:

- Transition from Common Diagnostics Defense Technology Objective (DTO).
- Initiate design and production for JBAIDS Biological Organism Identification Assays.
- Conduct Critical Design Review (CDR) and Engineering Design Test (EDT).
- Initiate Integrated Logistics Support (ILS) analysis development, technical drawing package requirements, and technical manuals.
- Prepare submission of Identification Assays to the Food and Drug Administration (FDA) for regulatory approval.

FY02 Acquisition Phase: Engineering and Manufacturing Development



Joint Biological Agent Identification and Diagnosis System

Lead Service

- FDA-approved diagnostic device
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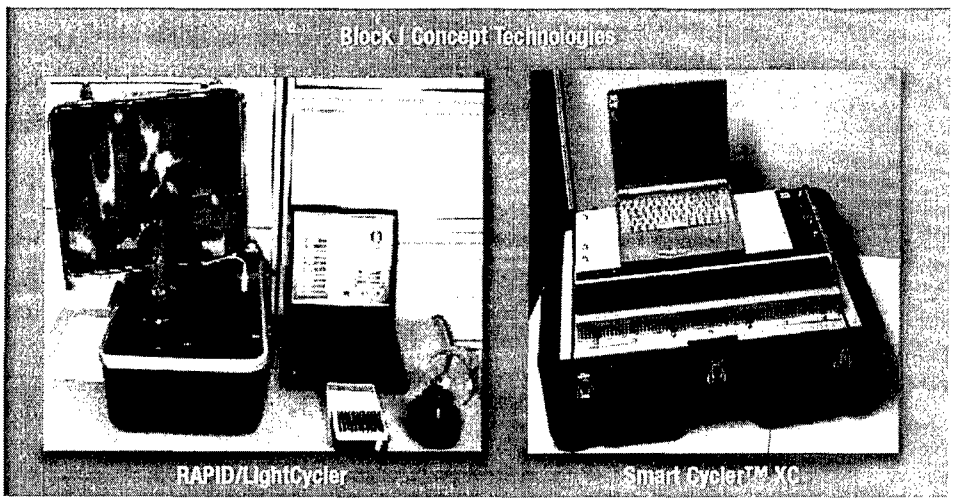
- Capable of simultaneous identification of at least eight BW agents or other biological agents of operational significance in clinical or environmental samples



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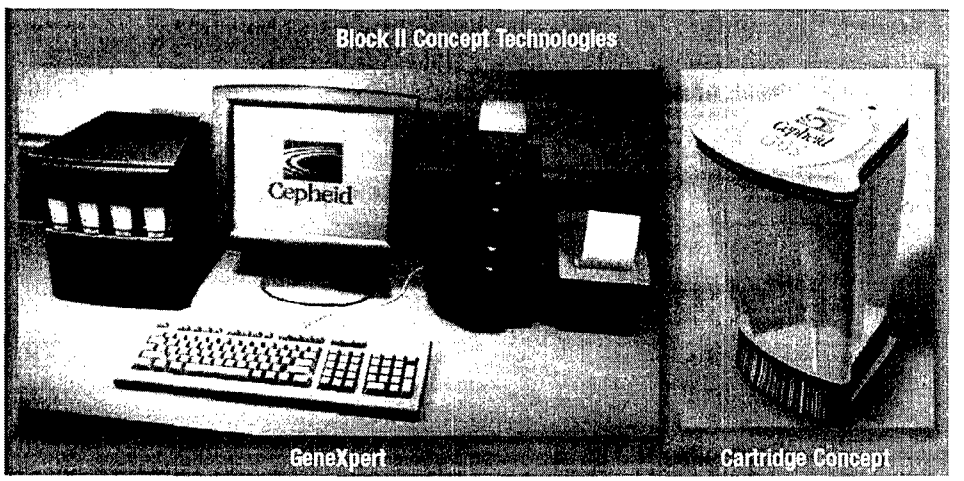

Contractors:

TBD

Program Description:

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FY01 Objectives:

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FY02 Objectives:

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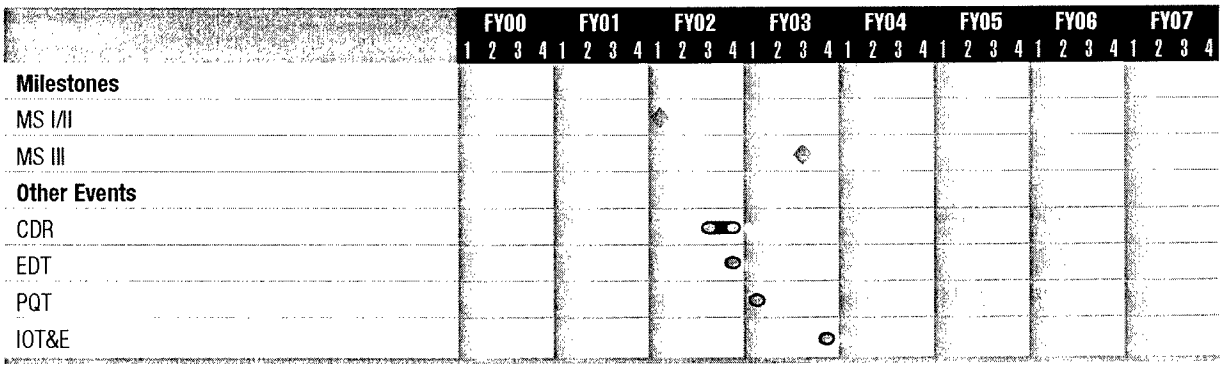
FY02 Acquisition Phase: Engineering and Manufacturing Development



Medical Biological Defense Vaccines

Lead Service

Joint Program Office for Biological Defense (JPO BD)

Joint Vaccine Acquisition Program (JVAP)

U.S. Army Medical Research and Materiel Command (USAMRMC)

FY08-09 Developmental Countermeasures

Vaccines Currently Funded for Development

- Tularemia Vaccine
- Smallpox Vaccine
- Venezuelan Equine Encephalitis (VEE) Vaccine
- Recombinant Botulinum Vaccine
- Plague Vaccine
- Combined VEE/Eastern Equine Encephalitis (EEE)/ Western Equine Encephalitis (WEE)
- Ricin Vaccine
- Next Generation Anthrax Vaccine
- Staphylococcal Enterotoxin(s) (SE) Vaccine

Contractors:

DynPort Vaccine Company (DVC)
FREDERICK, MD

FY00 Accomplishments:

USAMRMC – Technology Base

- Completed technical data package for recombinant SE vaccine candidates.
- Developed vaccine candidate for VEE virus type 1E and tested for safety in animals.
- Assessed the immunogenicity of vaccine components in multiagent vaccine delivery platforms.

JPO BD – Advanced Development/Procurement

- Executed phase 2a clinical trial for smallpox vaccine.
- Continued process development required for manufacture of multivalent recombinant botulinum neurotoxin serotypes A, B, C, E, F vaccine.
- Initiated process development required for manufacture of Tularemia live vaccine strain (LVS) vaccine.

FY01 Objectives:

USAMRMC – Technology Base

- Test VEE type 1E vaccine candidates for safety and efficacy in nonhuman primates (NHP).
- Determine immunogenic dose of live attenuated Brucella vaccine candidate in NHP.
- Compare efficacy of recombinant protective antigen (rPA) and licensed anthrax vaccine in animals and prepare technical data package supporting transition to advanced development.
- Complete Phase 0 Exit Criteria and prepare technical data package for recombinant plague vaccine.

JPO BD – Advanced Development/Procurement

- Transition plague vaccine to advanced development and NGAV vaccine component (rPA) to advanced development.

FY02 Objectives:

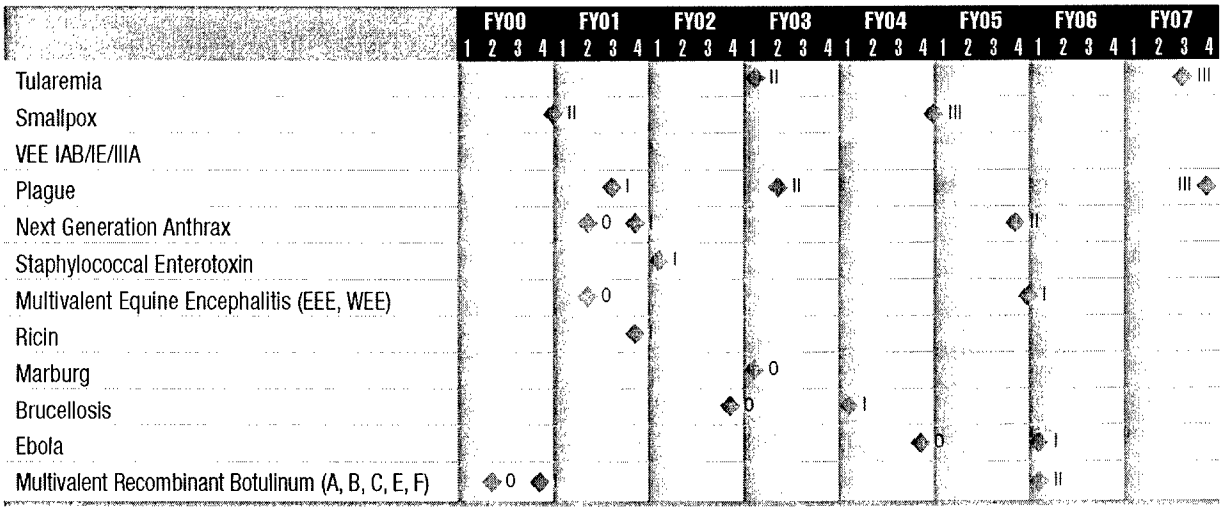
USAMRMC – Technology Base

- Test VEE type III and EEE vaccine candidates for efficacy in rodents and WEE and EEE vaccine candidates for safety and efficacy in NHP.
- Complete safety and efficacy testing of multiagent vaccine components in animal models.
- Perform preclinical animal studies with small-scale pilot lot of Brucella vaccine candidate.
- Evaluate intranasal, inhalation, and transdermal application of recombinant protein vaccine formulations.

JPO BD – Advanced Development/Procurement

- Manufacture consistency lots and conduct phase 2b clinical trial for smallpox vaccine (through FY04).
- Manufacture plague vaccine candidate pilot lot.
- Complete manufacturing process definition and manufacture pilot lot of Tularemia LVS vaccine; complete nonclinical studies; and initiate phase 1 clinical trials.

FY02 Acquisition Phase: Partial List of Vaccines in Advanced Development and in the Technology Base

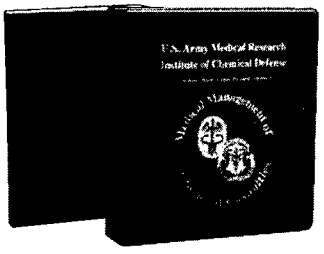


Medical CW/BW Information Products

Lead Service

Program Description:

The U.S. Army Medical Research Institute of Chemical Defense and the U.S. Army Medical Research Institute of Infectious Diseases are the world's premier sites for dissemination of information pertaining to the medical management of chemical or biological warfare agent casualties from military or terrorist activity. Regularly scheduled traditional on-site classroom training is being supplemented by the use of state-of-the-art distance learning technologies to greatly expand the course availability. Viewing audiences include international and U.S. military personnel as well as domestic first responders.



Medical Management of Chemical/Biological Casualties (MCBC) Course

- Audience: physicians and nurses.
- Course taught by experienced personnel with working knowledge of threat.
- Broad dissemination of courses (four double in-house, one AMSUS, 18 off-site, two video).

Field Management of Chemical/Biological Casualties (FCBC) Course

- Audience: medical and chemical noncommissioned officers, MSC, and Chemical Corps officers.
- Four to six in-house courses held per year.
- First echelon management of chemical/biological agent casualties.
- Course stresses planning, establishment, and management of a battalion aid station for both chemical and biological casualties to include decontamination site.

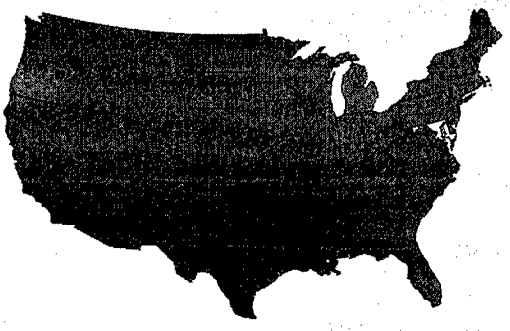
Satellite Courses

- Broad military, civilian, and international audience
- "Medical Response to Chemical Warfare and Terrorism"
- "Medical Response to Biological Warfare and Terrorism"

Contractors:

Camber Corporation
FREDERICK, MD

SAIC
JOPPA, MD



FY00 Accomplishments:

- Educated large audiences through various distance learning modalities (satellite, video, CD-ROM) at reduced cost.
- Provided education and consultation on medical issues of chemical/biological threat agents to military, federal, state, and local government, and civilian organizations.
- Developed Medical Management of Chemical Casualties Supplemental Training Materials V1.00 (CD-ROM).
- Provided support to military quick response teams.
- Developed Chemical Reference Database with 1,370 scanned articles.
- Developed the Medical Management of Chemical Casualties Database (student registration tracking) in Microsoft Access.
- Provided support to the following conferences: AMSUS, MEDIC-WMD2000, NDMS, and Bioscience.
- Published third edition of the Medical Management of Chemical Casualties Handbook.
- Published second edition of the Field Management of Chemical Casualties Handbook.
- Aired a live interactive satellite broadcast on "Biological Warfare and Terrorism: Medical Issues and Response" on 26-28 September 2000 with on-line registration, testing, and certification.
- Distributed the FY99 "Biological Warfare and Terrorism: the Military and Public Health Response" accredited (CME/CNE/CEU) video tape set and the CD-ROM on "Medical Management of Biological Warfare Casualties" to over 700 military medical sites worldwide.

FY01 Objectives:

- Continue to provide education and consultation on medical issues of chemical/biological threat agents to military, federal, state, and local government, and civilian organizations through various distance learning modalities at reduced cost.
- Update the Medical Management of Chemical and Biological Casualties Course Program of Instruction (POI), Terminal Learning Objectives (TLO), Individual Training Program (ITP), and Student Evaluation Plan (SEP).
- Develop an Interactive Multimedia Instruction (IMI) module for the Medical Management of Chemical Casualties Course (web and CD).
- Develop an Interactive Multimedia Equipment Catalog.
- Develop a Medical Management of Chemical and Biological Casualties Course Test Question Database.
- Continue to support various conferences, e.g., AMSUS, MEDIC-WMD2000, and NDMS.
- Continue live interactive satellite broadcast.
- Provide ongoing education, consultative services, and support to military quick response teams on the medical defense against CW/BW and terrorism.
- Publish the fourth edition of the Medical Management of Biological Casualties Handbook.

FY02 Objectives:

- Continue to provide education and consultation on medical issues of chemical/biological threat agents to military, federal, state, and local government, and civilian organizations through various distance learning modalities at reduced cost.
- Update the FCBC Course POI, TLO, ITP, and SEP.
- Continue to support various conferences, e.g., AMSUS, MEDIC-WMD2000, NDMS, and Bioscience.
- Continue live interactive satellite broadcast.
- Provide technical information and references on DVD.
- Provide ongoing education, consultative services, and support to military quick response teams on the medical defense against CW/BW and terrorism.

Course Attendance (Registered Participants)

Education/Training Courses	Army	Navy	Air Force	Marines	Civilian	TOTAL
FY00 Actuals						
Medical Management of Chemical/Biological Casualties Course	899	109	426	0	90	1,524
Field Management of Chemical/Biological Casualties Course	336	29	22	0	44	431
Medical Management of Chemical/Biological Casualties Video Course	11	11	17	0	2	41
Subtotal	1,246	149	465	0	136	1,996
BW and Terrorism: Medical Issues and Response Satellite Courses	1,685	350	630	10	7,770	10,445
FY00 TOTAL	**2,931**	**499**	**1,095**	**10**	**7,906**	**12,441**
FY01 Projected						
Medical Management of Chemical/Biological Casualties Course	936	109	437	0	78	1,560
Field Management of Chemical/Biological Casualties Course	273	24	18	0	35	350
Medical Management of Chemical/Biological Casualties Video Course	81	81	123	0	15	300
Subtotal	1,290	214	578	0	128	2,210
BW and Terrorism: Medical Issues and Response Satellite Courses	2,000	450	500	50	7,000	10,000
Medical Response to CW and Terrorism 2000 Satellite Courses	1,450	300	600	50	2,600	5,000
FY01 TOTAL	**4,740**	**964**	**1,678**	**100**	**9,728**	**17,210**

Chemical Warfare (CW) Agent Pretreatments

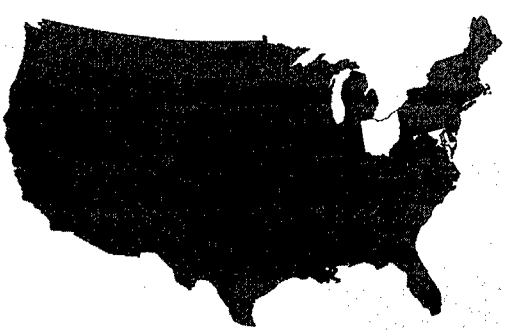
Lead Service

- The human butyrylcholinesterase enzyme has been mutated to spontaneously reactivate after its inhibition by nerve agents, thereby catalyzing the hydrolysis of nerve agents.
- This type of research employs the latest techniques in biotechnology, including enzymes tailored by site-directed mutagenesis.
- Skin Exposure Reduction Paste against Chemical Warfare Agents (SERPACWA)
  - CW agent skin pretreatment

Contractors:

Battelle Memorial Institute
COLUMBUS, OH

McKesson Bioservices
ROCKVILLE, MD



Program Description:

The medical chemical defense research efforts emphasize preventing chemical injuries by using pretreatments. Efforts are under way to design compounds that will "scavenge" and detoxify CW agents such as nerve agents or cyanide, and destroy the agent or physically remove it from the body. There is a similar effort to develop catalytically based protection for skin using a reactive compound mixed with a topically applied CW agent barrier cream.

Compounds or methods that show therapeutic promise are evaluated to guarantee their safety, efficacy, and compatibility with established therapies and with other militarily relevant chemicals. Each drug that is a candidate CW agent pretreatment, treatment, protectant, or decontaminant is subjected to a battery of tests to transition to advanced development those that are the safest and most effective. Tests include behavioral studies that investigate whether these compounds interfere with the performance of military personnel.

FY00 Accomplishments:

- Identified best candidates of genetically engineered scavengers as next generation pretreatments for nerve agents. Developed *in vivo* transgenic animal models for use as test beds for evaluating scavengers. Expanded the evaluation of human protein catalytic scavengers to include enzymes and human butyrylcholinesterase. Initiated development of an animal model capable of producing large quantities of recombinant enzyme scavenger.
- Developed and validated six evaluation models needed in the active topical skin protectant (aTSP) decision tree network (DTN) including the M8 paper test, penetration cell test, proof of decon test, weanling pig test, rabbit lesion area ratio test, and the rabbit acetylcholinesterase inhibition test. Identified 78 candidate reactive ingedients. Prepared over 200 candidate formulations for aTSP DTN evaluation. Began Phase 0 safety and efficacy studies for an active topical skin protectant.
- Identified a novel compound that alters the structure of the stratum corneum to increase skin resistance to penetration by chemicals.

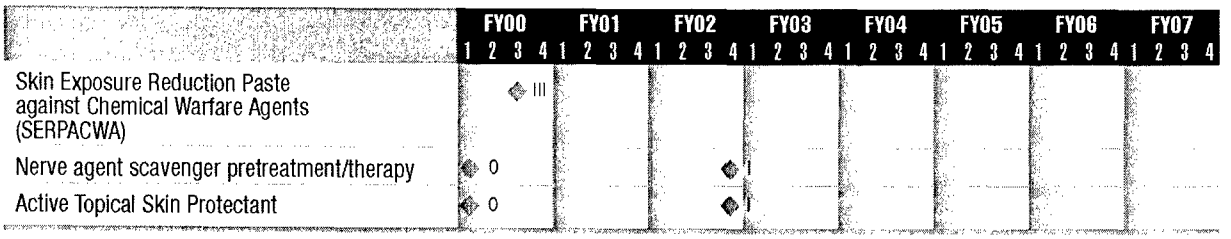
FY01 Objectives:

- Test best candidates of genetically engineered scavengers using advanced test systems, e.g., transgenic or knockout species.
- Demonstrate the efficacy of aTSP candidate formulations using two animal species. Complete aTSP formulation studies and demonstrate efficacy against estimated battlefield levels of CW agents.

FY02 Objectives:

- Select best bioscavenger candidate(s) for nerve agents based on comparison of performance in DTN and other differentiating studies and prepare Milestone I transition package. Set up non-human primate (NHP) animal models to evaluate different scavengers for safety and efficacy with guidance from scientific steering committee. Examine human protein scavengers for autoimmune issues.
- Select the best candidate(s) for transfer to advanced development.

Schedule: CW Agent Pretreatment Efforts

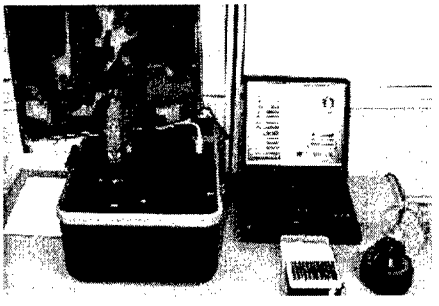


CB Agent Therapeutics and Diagnostics

Lead Service

Vesicant Research

- Confocal laser scanning microscopy and immunofluorescent techniques used to determine the effects of sulfur mustard (HD) following exposure



Common Diagnostic Systems

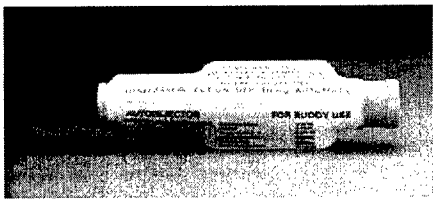
- A battery of nucleic acid-based detection systems
- Broad applications
- Sensitive and specific

Field Cholinesterase Test Kit

- Self-contained, hardened
- Photometric analyzer
- Small sample size, serves up to 96 service members in one kit
- Results available in four minutes

Convulsant Antidote for Nerve Agent

- Consists of diazepam in an autoinjector
- Used as an adjunct therapy for nerve agent poisoning to control convulsions, protect against brain injury, and enhance survival

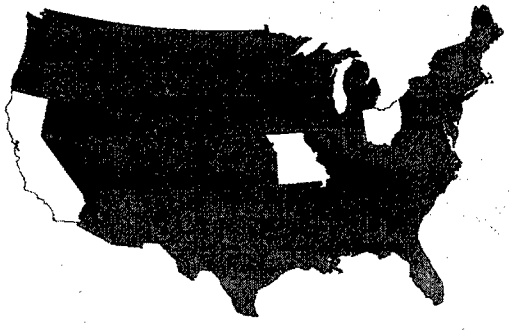


Contractors:

Battelle Memorial Institute
COLUMBUS, OH

Cpheid
SUNNYVALE, CA

Meridian Medical Technologies, Inc.
ST. LOUIS, MO



FY00 Accomplishments:

BW Agent Therapeutics/Diagnostics

- Demonstrated alternatives for portable nucleic analysis of biological threat agents in laboratory-based studies.
- Correlated in vitro antibiotic sensitivities on glanders with a case study and recommended a treatment regime for human glanders.
- Evaluated efficacy of licensed drugs that inhibit SE-induced pro-inflammatory cytokines.
- Compared in vitro efficacy of candidate antiviral drugs against more than 40 different variola (smallpox) isolates.

CW Agent Therapeutics/Diagnostics

- Demonstrated safety and efficacy of an advanced anticonvulsant and transitioned the compound to advanced development.
- Identified 62 candidate medical countermeasures for vesicants that provided significant reduction (>50% compared to controls) in HD-induced edema, histopathology, or both in the mouse ear assay. Nineteen were shown to reduce edema or histopathology, and six effectively reduced both edema and histopathology.
- Discovered that for HD-exposed eyes, early administration of steroid eye drops supplemented up to two hours later by triamicinolone/ cefazolin administered as a depot injection provides considerable protection against HD-induced ocular damage.

FY01 Objectives:

BW Agent Therapeutics/Diagnostics

- Evaluate portable nucleic acid analysis systems in the laboratory and the field.
- Test immunomodulators in animals for protection against plague and glanders.
- Determine dose and schedule for lead drug candidate for IV treatment of smallpox.

CW Agent Therapeutics/Diagnostics

- Evaluate the efficacy of lead vesicant countermeasure compounds.
- Assess the efficacy of fielded, advanced development, and exploratory development countermeasures to threat agents.
- Determine pharmacological, physiological, and toxicological effects of long term, low-level chemical warfare agents using identified models.
- Develop an automated, fixed-laboratory based, analytical method to measure acetylcholinesterase in blood for mass analysis with commercial-off-the-shelf technology.

FY02 Objectives:

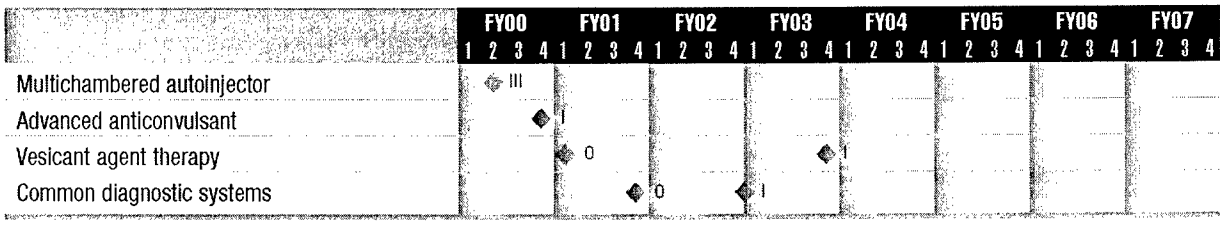
BW Agent Therapeutics/Diagnostics

- Prepare technical data package to support transition of medical diagnostic device to advanced development.
- Evaluate immunomodulators in combination with antibiotics in animals for protection against bacterial threat agents.
- Optimize formulation and pharmacodynamics of lead drug candidates that inhibit SE-induced intoxication.

CW Agent Therapeutics/Diagnostics

- Select best countermeasure to vesicants based on comparison of performance in decision tree network and other differentiating studies.
- Determine optimal midazolam – anticholinergic drug combination and order of administration to obtain maximal anticonvulsant effect against seizures in a non-human primate (NHP) model.
- Select best countermeasure to threat agents based on comparison of performance in decision tree network and other differentiating studies.
- Investigate new biochemical and histological assay technologies sensitive enough for use in low-level chemical warfare agent exposures and continue investigations on the use of biological markers to indicate prior low-dose chemical warfare agent exposures.

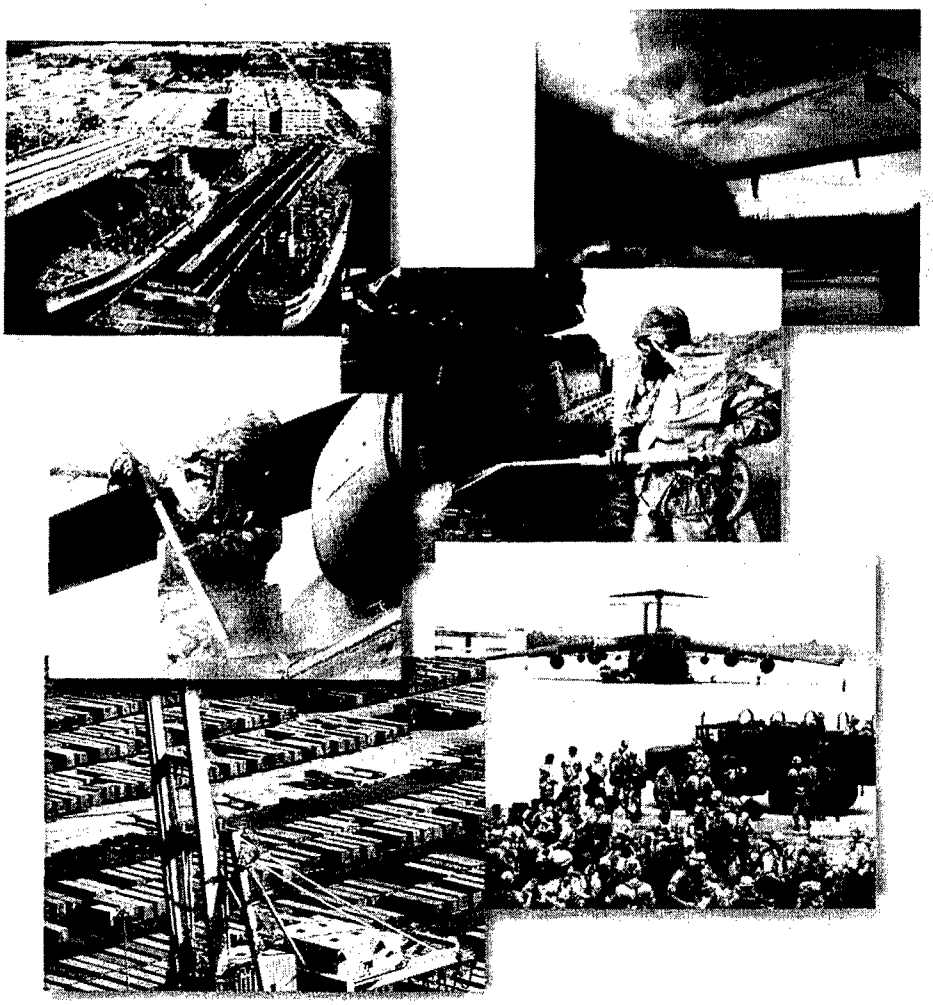
Schedule: CB Agent Therapeutic and Diagnostic Efforts



Joint Service Fixed Site Decontamination (JSFXD)

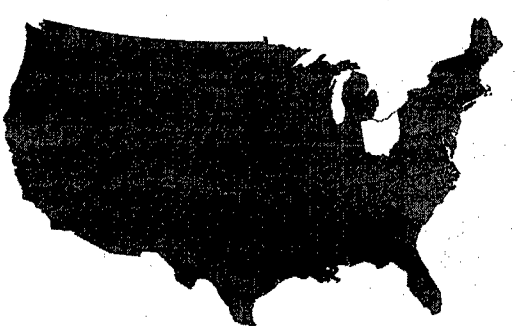
Lead Service

- **Decontamination of fixed sites, ports of entry, airfields, logistics nodes and key command and control centers**
- **Family of decontaminants and applicators**
- **Nontoxic and noncorrosive**



Contractors:

Battelle Memorial Institute
Columbus, OH



Program Description:

The JSFXD will be employed on the integrated battlefield as a means to remove, neutralize, or eliminate NBC/Toxic Industrial Materials (TIM) hazards posing threats to military operations. To allow the joint force to effectively operate for sustained periods of time in a contaminated environment, the JSFXD will use the latest in technology to eliminate NBC/TIM hazards in a safe and effective manner. The JSFXD will incorporate both a family of decontaminants and applicator systems to enhance force protection of personnel, equipment, facility, and area decontamination.

The JSFXD program is divided into three blocks. Block I will field decontaminants that will be used with integral or existing applicators. Block II will field any additional applicators required to provide the full fixed site decontamination capability (excluding Block III). Block III will provide applicators for skin/casualties with open wounds. These items will be used to decontaminate equipment, personnel, and vital areas to sustain critical cargo flow and operational tempo at ports, airfields, logistic nodes and key command and control centers.

FY00 Accomplishments:

- Conducted technology definition and assessment of Commercial-off-the-Shelf (COTS)/Non-Developmental Item (NDI) decontamination equipment and decontaminants for Block III.
- Conducted technology definition and assessment of development technologies.

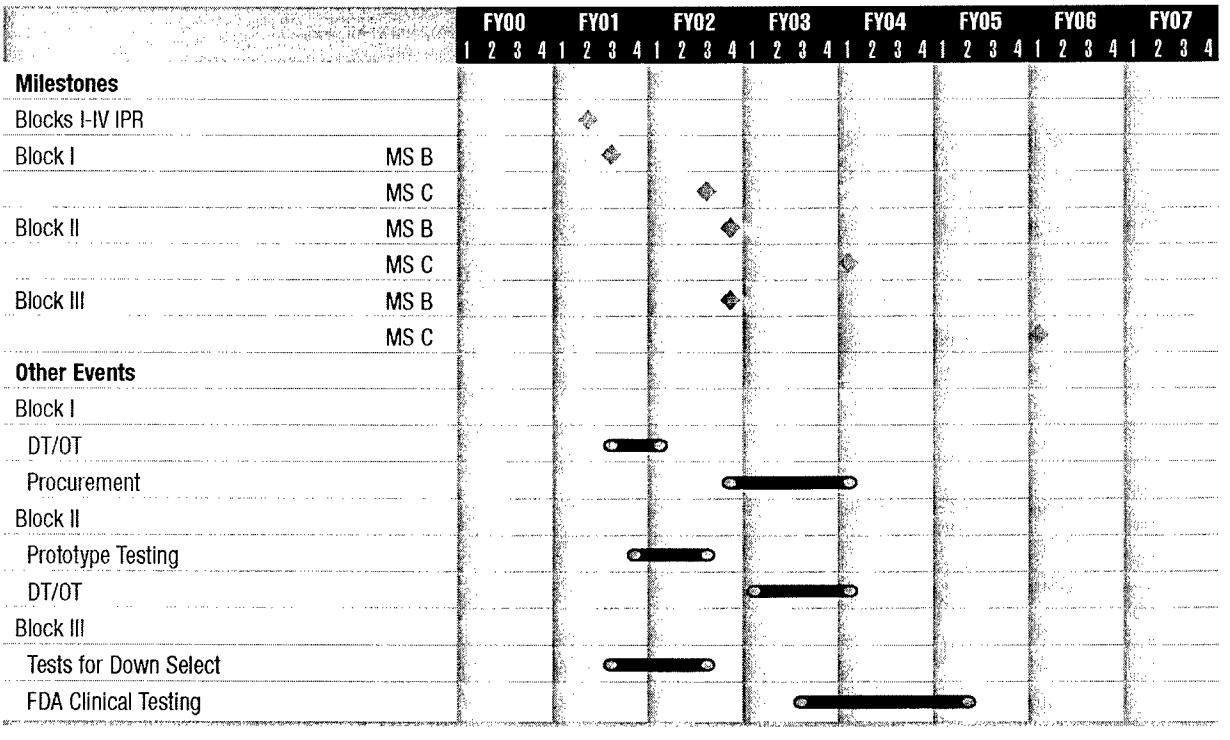
FY01 Objectives:

- Complete performance specifications to support all blocks and technical documentation for Block I.
- Initiate Developmental Test (DT)/Operational Test (OT) for Block I family of decontaminants.
- Procure skin decontaminant candidates and initiate preliminary toxicology testing and other evaluations to support Food and Drug Administration (FDA) approval.

FY02 Objectives:

- Complete DT/OT for Block I family of decontaminants.
- Procure 54,424 gallons of Block I decontaminant.
- Procure 15 prototype Block II family of applicator systems to develop prototype applicator and containment systems.
- Initiate DT of Block II family of applicator systems.
- Continue toxicology testing and other evaluations necessary for FDA approval to support downselect of Block III skin/casualty decontamination.

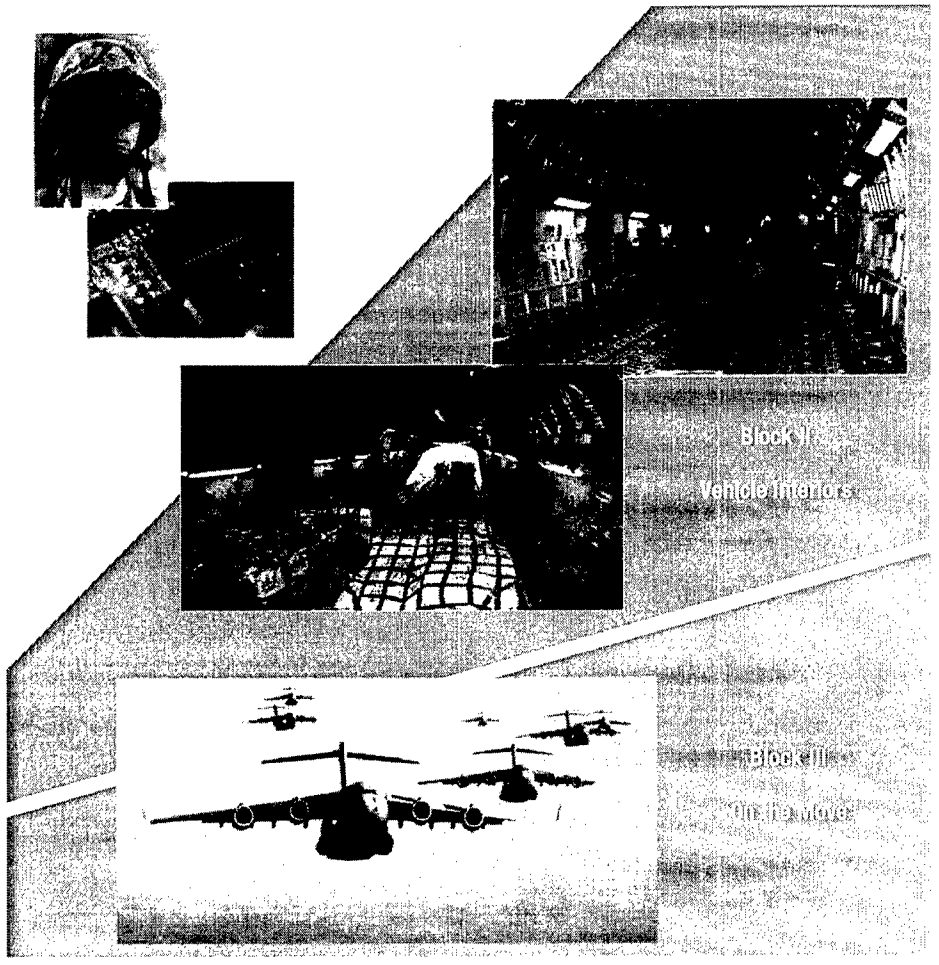
FY02 Acquisition Phase: Block I – Production, Fielding/Deployment, and Operational Support



Joint Service Sensitive Equipment Decontamination (JSSED)

Lead Service

- Addresses Nonaqueous Equipment Decon System (NAEDS) requirements
- Consists of three distinct capability blocks:
  - Decon of small, sensitive equipment/items and components/parts
  - Decon of interior spaces of vehicles containing electronics and exterior of vehicles where the user cannot use DS2
  - Decon during operations ("On-the-Move" Decon)



Contractors:

TBD

Program Description:

The JSSED system will fill a need to decontaminate chemical and biological warfare agents from sensitive equipment, vehicle and aircraft interiors, and associated cargo, as defined by the Joint Service Operational Requirements Document for the JSSED. The JSSED will consist of at least two distinct systems: Block I will be developed to decontaminate sensitive items and equipment. Block II will concentrate on aircraft/vehicle interiors. Block III will provide a system to effect decontamination of aircraft/vehicle interiors while the aircraft/vehicle is in-flight/operation. Block III may be a Pre-Planned Product Improvement (P3I) for Block II systems.

FY00 Accomplishments:

- Conducted Concept Exploration (CE) for Block I and initiated CE for Blocks II/III.

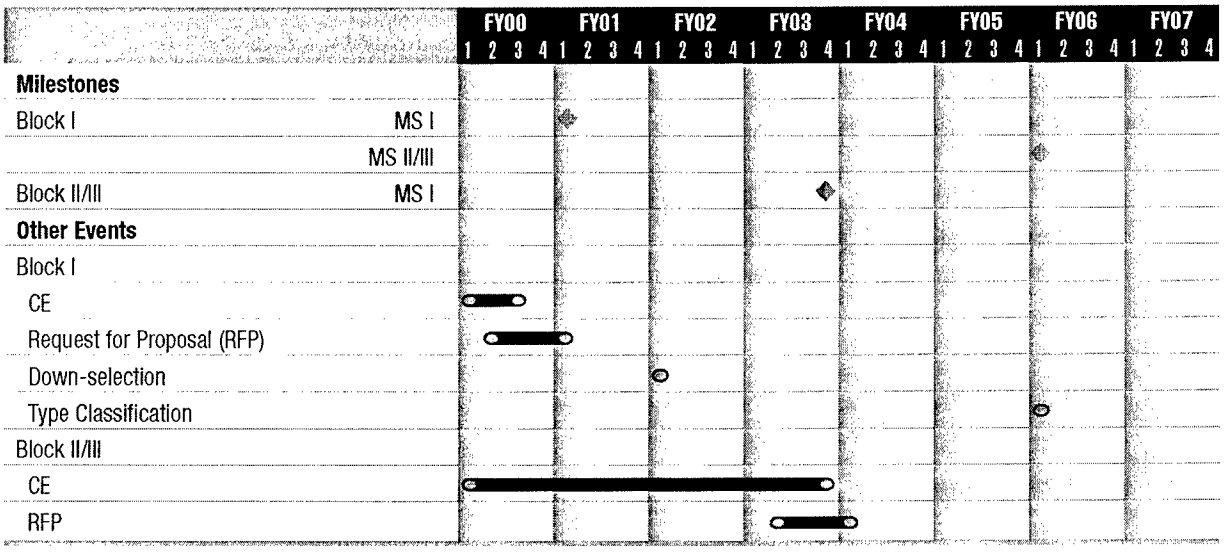
FY01 Objectives:

- Procure and analyze Block I competitive prototypes for decontamination efficacy.

FY02 Objectives:

- Select Block I system following prototype competition.
- Conduct Block I Interim Program Review (IPR) to select final technology and finalize Block I system design.
- Award contract and fabricate Block I developmental test systems.

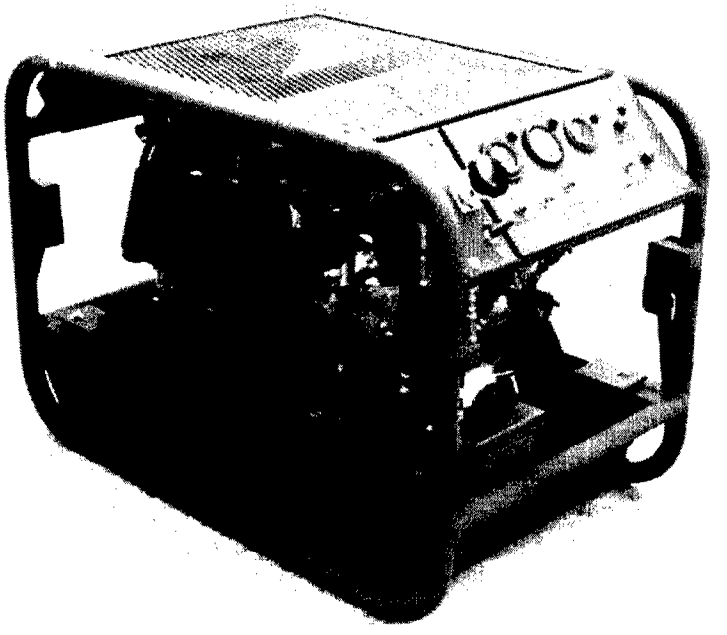
FY02 Acquisition Phase: Program Definition and Risk Reduction

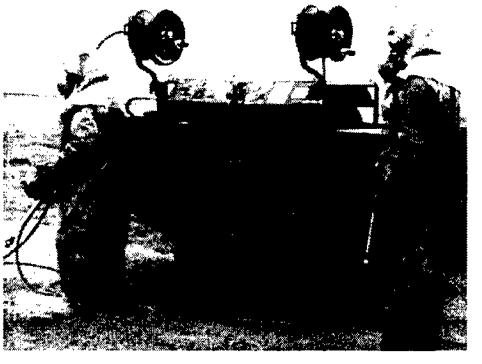


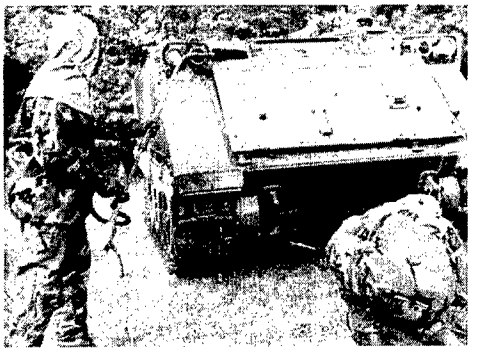
Modular Decontamination System (MDS)

Lead Service

- Limit the spread of NBC contamination on the battlefield
- Replaces the M12A1 Skid Mounted Decon Apparatus







Contractors:

Centech Group, Inc.
ALEXANDRIA, VA

Program Description:

The MDS includes one M21 Decontaminant Pumper (DP) module and two M22 High Pressure Washer (HPW) modules. The M21 DP is capable of delivering DS2 or liquid field expedient decontaminants such as formalin, household bleach, and diesel fuel. The M21 DP may be operated from the ground or trailer. When trailer mounted, it is capable of drawing the decontaminant directly from a container on the ground. Accessories include hoses and hose reels, two trigger-controlled spray wands, and two electrical-powered scrub brush assemblies. The M22 HPW will provide ambient or heated water at pressures up to 3,000-pounds/square inch (psi) at a rate of five gallons per minute (gpm) with the capability of injecting liquid detergents and providing a high volume (40 gpm) flow of cold water. Accessories include hoses and hose reels, trigger-controlled spray wands, a shower bar, nozzles, and hydrant adapters. The M22 HPW will be capable of drawing water from natural water sources and delivering it at variable adjustable pressures, temperatures, and flow rates. The hydrant adapters will provide connections for using urban water supplies. Major component items include a 3,000-gallon flexible water tank (two per system), and a 125-gpm diesel pump (one per system). Associated Support Items of Equipment (ASIOE) include a trailer for each module (three per system).

FY00 Accomplishments:

- Procured 71 Modular Decontamination Systems.

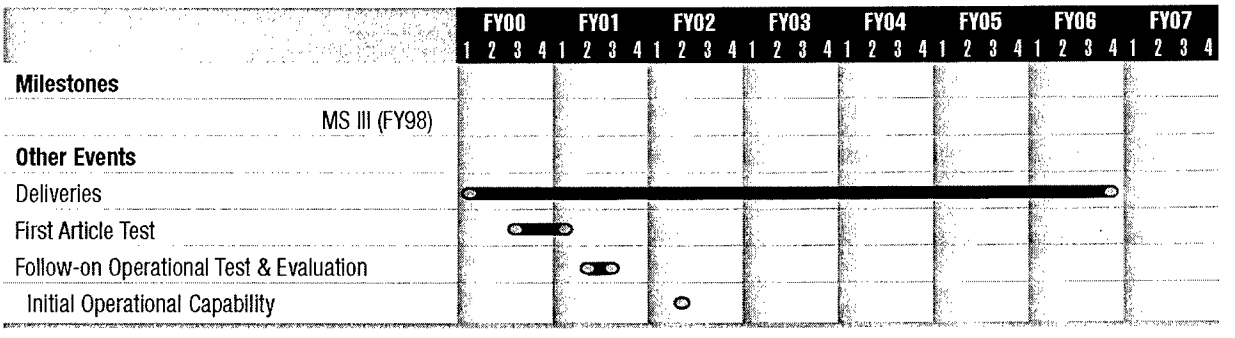
FY01 Objectives:

- Complete First Article Testing.
- Conduct Follow on Operational Test and Evaluation.
- Continue production delivery from prior year procurements.

FY02 Objectives:

- Procure 27 Modular Decontamination Systems.

FY02 Acquisition Phase: Production, Fielding/Deployment, and Operational Support

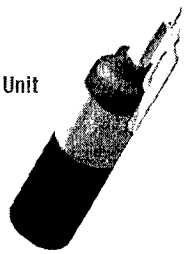


Lead Service

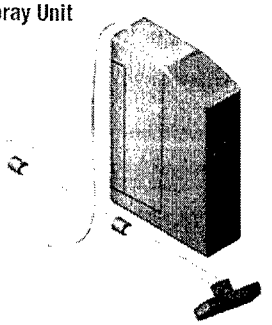
- Noncorrosive, nonaqueous decontaminant
- Increased reactivity and capacity
- Reduced off-gassing and contact hazards
- Potential replacement for current DS2 decontaminant

Replacement for:

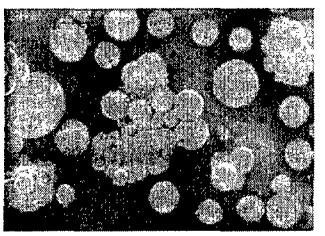
M-11 Spray Unit



M-13 Spray Unit



Highly Adsorptive, Reactive Powder

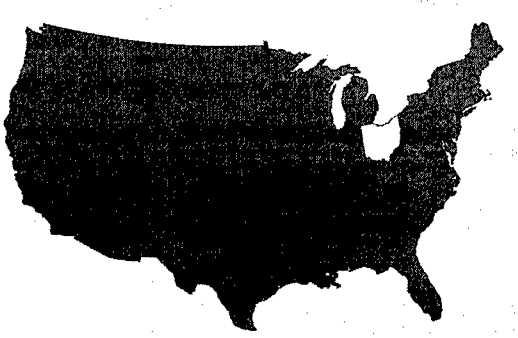


M24 Sorbent Decontamination System

Personal Wipedown Mitts (BDU Pocket-sized Packet)

Contractors:

Guild Associates
DUBLIN, OHIO (R&D)



Program Description:

This program consists of two separate systems: personal wipedown operations and operator spraydown operations. Sorbent Decontamination is an immediate decontaminant that is superior to the XE555 carbonous and ion exchange mix currently used in the M295 kit. The new sorbent eliminates DS2 from the operator spraydown procedures. The key requirements for the sorbent are a reduction in off-gassing and contact hazard associated with the sorbent after use when compared to the M295 kit. The sorbent is environmentally acceptable, noncorrosive, stable, usable over a wide temperature range, and can be carried and used safely by personnel. Sorbent Decontamination will be used by personnel to decontaminate personal equipment, key areas of vehicles, and crew-served weapons. It will also eliminate the transfer hazard, and preserve Mission Oriented Protective Posture (MOPP) integrity.

FY00 Accomplishments:

- Developed Technical Data Package (TDP) and built Engineering Design Test (EDT) hardware for operator spraydown system.

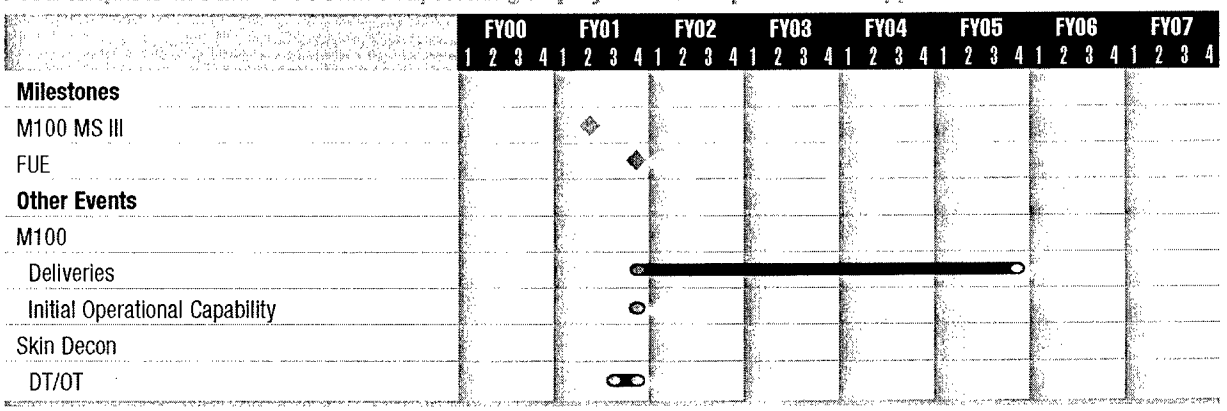
FY01 Objectives:

- Initiate development of end item design using carbon cloth technology to facilitate absorption of contaminant from skin.
- Conduct toxicity testing of sorbent material potential for skin decontamination, and develop engineering change proposal incorporating the sorbent material into the M291 skin decontamination kit.
- Conduct EDT/Initial Operational Test (IOT) of skin decontamination kit.
- Procure 40,000 M100 Sorbent Decontamination kits.

FY02 Objectives:

- Procure 120,000 M100 Sorbent Decontamination kits.

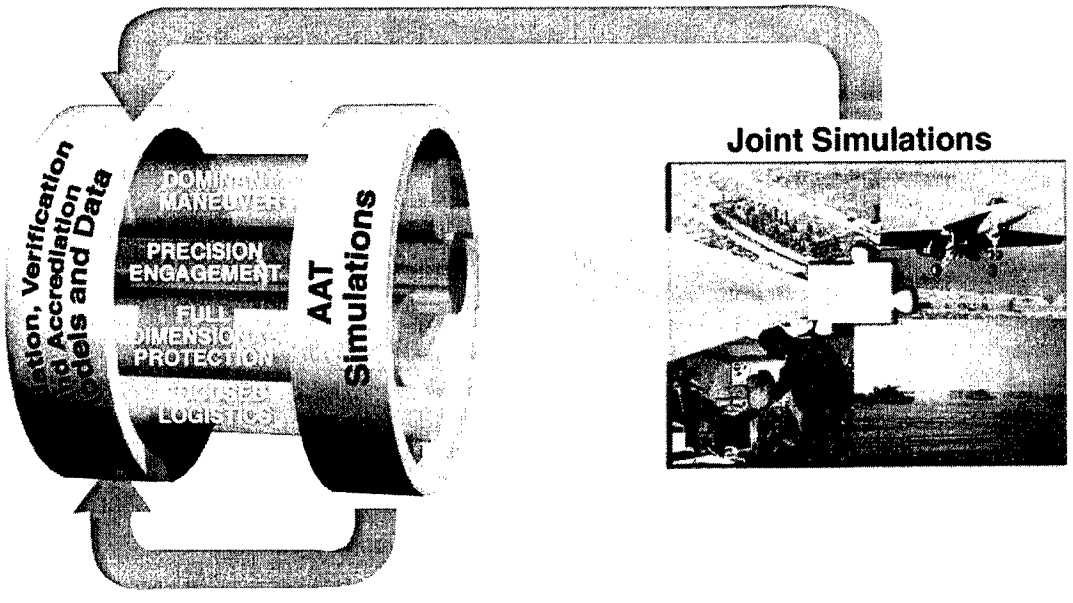
FY02 Acquisition Phase: Production, Fielding/Deployment and Operational Support



Modeling and Simulation

Lead Service

Recent direction from the Deputy Secretary of Defense (DEPSECDEF) has charged the Deputy Assistant to the Secretary of Defense for CB Defense (DATSD(CBD)) with responsibility and authority for approval of DoD common use chemical and biological models and simulations (M&S) and associated data. The DATSD(CBD) has established a Modeling & Simulation Advisory Council (MSAC) to provide advice on M&S and associated data. The Joint Service Integration Group (JSIG) has established an M&S Requirements Panel and initiated work to define M&S requirements. The Joint Service Materiel Group (JSMG) has established an M&S Commodity Area and initiated programatic requirements for M&S programs ready to transition from the tech base. The JSIG has begun work on a DoD Chemical and Biological M&S Master Plan. With input from the JSMG and agencies conducting CB M&S outside of the CB Defense Program, this will provide both the requirements vision and an executable plan to address M&S needs for operations, analysis, training and acquisition. Throughout development, M&S Program Managers will be required to conduct proper Verification, Validation, and Accreditation and test and evaluation of M&S systems to ensure that our chemical and biological models and simulations meet warfighter needs.



FY00 Accomplishments:

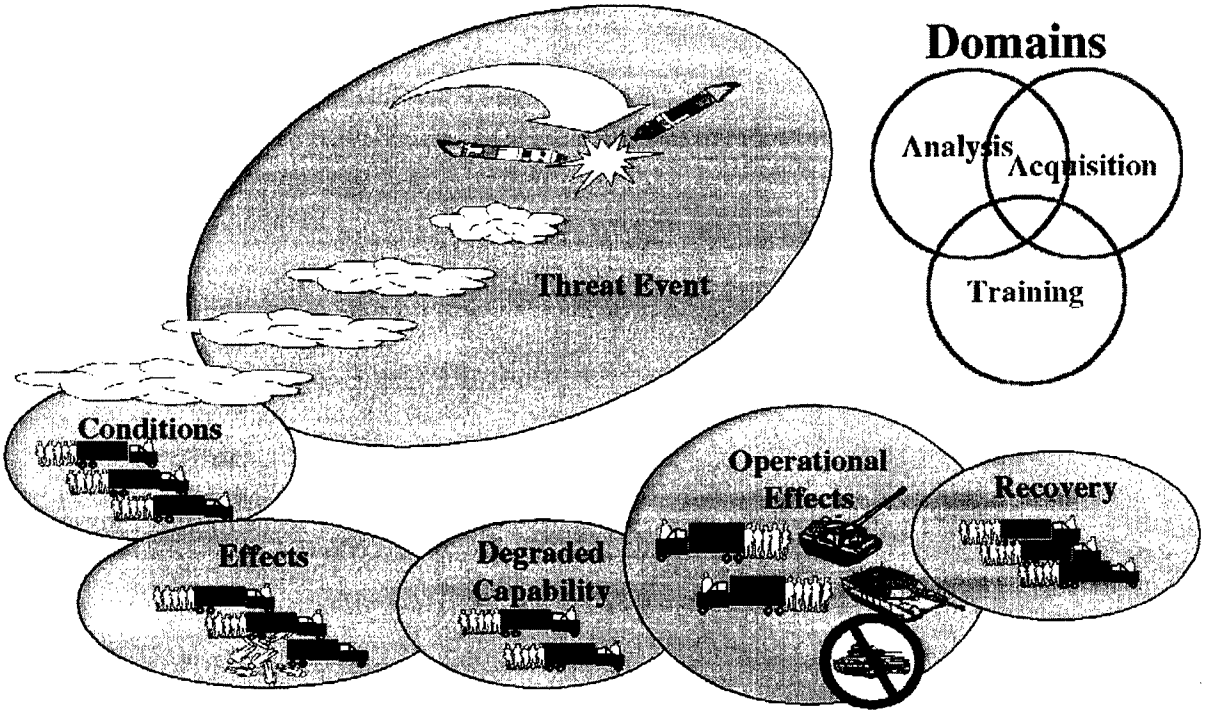
- JSIG completed White Paper to provide initial vision guidance to M&S requirements.
- JSIG completed draft vision and requirements portion of M&S Master Plan.
- JSMG established M&S Commodity Area Manager.
- JSMG completed draft M&S Road Map portion of M&S Master Plan.
- JSMG completed M&S inputs to the CBD Research, Development, and Acquisition (RDA) Plan and Report to Congress.

FY01 Objectives:

- Complete DoD CB M&S Master Plan.
- Complete Milestone A (MS A) and draft Operational Requirements Document (ORD) for Joint Effects Model (JEM) and Joint Operational Effects Federation (JOEF).
- Complete draft Virtual Prototyping System (VPS) ORD.
- Complete draft M&S Training System (MSTS) ORD.
- Complete draft Joint Ground Effects Model (JGEM) ORD.
- Complete draft Civil Support Information System (CSIS) ORD.
- Obtain funding approval for JEM, JOEF, VPS, MSTS, JGEM, and CSIS.

FY02 Objectives:

- Complete MS A for VPS, MSTS, JGEM, and CSIS.
- Complete final approved ORDs for JEM, JOEF, VPS, MSTS, JGEM, and CSIS.
- Complete JEM Block I efforts leading to Milestone B.



Lead Service

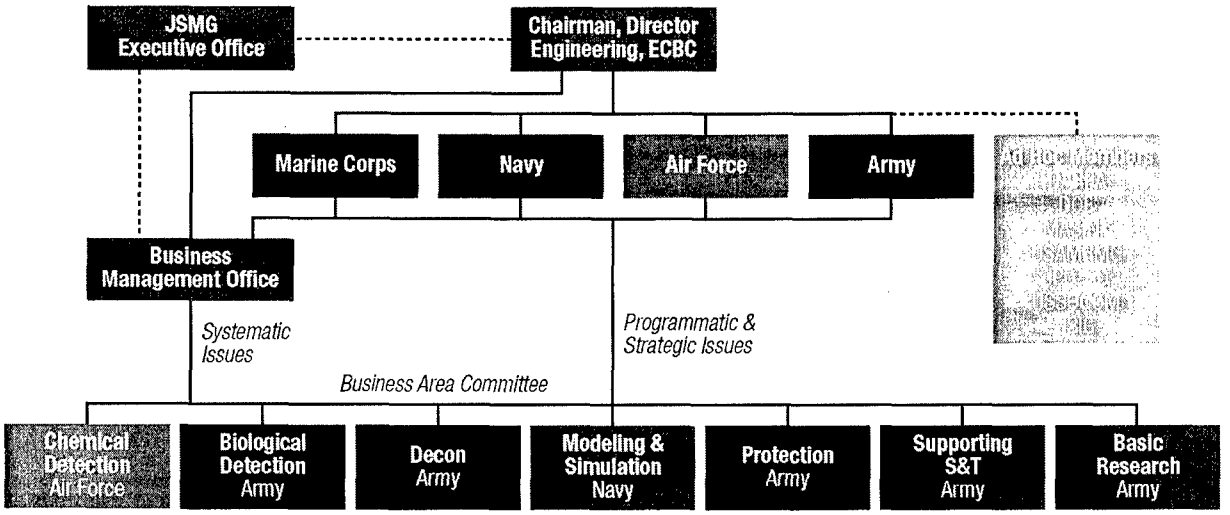
The Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense (DATSD(CBD)) is the Office of the Secretary of Defense (OSD) office responsible for providing technical oversight of all service and defense agency science and technology base (S&T) programs and reviewing these programs through three key Department of Defense (DoD) S&T documents.

- The Joint Warfighting S&T Plan (JWSTP)
- The Defense Technology Area Plan (DTAP), and
- The Basic Research Plan (BRP)

Defense S&T Reliance, under the leadership of the Deputy Under Secretary of Defense for Science and Technology (DUSD (S&T)), provides the framework and assessment process to enable the DoD S&T community to work together to enhance the Department's S&T program. The S&T Reliance has participation of the Services and DoD Agencies, thereby strengthening cooperation and improving responsiveness to their warfighting and acquisition customers. Twelve technology area panels form the Defense S&T Reliance and are responsible for preparation of the Defense Technology Area Plan (DTAP). DTRA, CB Director chairs the DTAP Chemical/Biological Defense technical area panel and is responsible for Chapter 12 of the DTAP. The DTAP presents DoD objectives and the Applied Research (6.2) and Advanced Technology Development (6.3) investment strategy for technologies critical to DoD acquisition plans, service warfighter capabilities, and the Joint Warfighter S&T Plan. It also takes a horizontal perspective across the service and defense agency efforts, thereby charting the total DoD investment for a given technology. The DTAP documents the focus, content, and principal objectives of the overall DoD science and technology efforts. This plan provides a sound basis for acquisition decisions and is structured to respond to the DUSD(S&T) emphasis to mature technology for rapid transition to the operational forces.

The Joint Science and Technology Panel for CB Defense (JSTPCBD) is the principal organization under the Joint Service Materiel Group (JSMG) chartered to manage CB technology-based programs. The JSTPCBD follows Defense Planning Guidance in preparing the CB Defense Program S&T budget and programming efforts. Through this process the JSTPCBD generates a list of ranked proposals with recommended funding levels.

Joint Science and Technology Panel for CB Defense (JSTPCBD)



FY00 Accomplishments:

- Developed cytotoxicity methods to enhance toxicological screening of CB Materials.
- Developed concept auto sample processor systems for genetic and mass spectrometric detection and initiated breadboard construction.
- Completed market survey and technology downselect for technologies to detect chemical agents in water.
- Completed front-end analysis and master plan for individual protection.
- Improved candidate decontamination enzyme activity on V-agents (persistent nerve) ten-fold and production of nerve agent enzymes by five to ten-fold.
- Developed concept of improved CB duty uniform incorporating selectively permeable membrane.

FY01 Objectives:

- Demonstrate agreement between model and experiment of imaging of biological clusters.
- Demonstrate new aerosol collector with substantially reduced power consumption and operable at low temperatures.
- Demonstrate automated sample processor systems for genetic and mass spectrometric detection of biological materials.
- Develop models for simulation of CB weapons effects on joint force operations.
- Complete water monitor breadboard design integrating chemical and biological contaminant detection capabilities.
- Demonstrate 16-pixel imaging passive infrared (IR) spectrometer in real-time operation at 100 Hz.
- Complete demonstration of sensitive equipment decontamination methodologies and transition to Joint Service Sensitive Equipment Decontamination (JSSED) Block I program.

FY02 Objectives:

- Demonstrate molecular imprinting technique for individual passive chemical agent detector.
- Demonstrate initial operational capability of the Simulation, Training, and Analysis for Fixed Sites (STAFFS) model for simulation of CBW effects on operations at Aerial Ports of Debarkation (APODs) and Sea Ports of Debarkation (SPODs).
- Demonstrate breadboard water monitor integrating chemical and biological detection capabilities.
- Complete assessment of utility of radar as CB event queuing technology.
- Develop approaches for Superior Decontamination Systems using advanced formulations.
- Complete miosis threshold studies for sarin over extended exposure durations and initiate multi-species animal studies for second-generation nerve agents.

Advanced Technology

What is an ACTD?

Advanced Concept Technology Demonstrations (ACTDs) are an integral element of reforming the acquisition process and accelerating the application of mature technologies to solve military problems. The ACTD process permits the early evaluation of mature advanced technology to meet the needs of the warfighter. Evaluations are accomplished by the warfighter to determine military utility before a commitment is made to proceed with formal acquisition. ACTDs also allow the warfighter to develop and refine operational concepts to take full advantage of new capabilities. ACTDs provide sustainment support for two years for the continued evaluation of the technology after which it can be transitioned into an appropriate phase of formal acquisition.

ACTDs are sponsored and executed jointly by a team composed of an operational user and a technology developer, with approval and oversight from the Deputy Under Secretary of Defense for Advanced Technology (DUSD(AT)). ACTDs are normally conducted under an Integrated Product Team (IPT) approach that considers the operational needs, training, supportability, and other related issues, as well as concerns of the acquisition community.

The sponsor is responsible for defining the mission and scenario, concept of operations, operational forces, and post-demonstration evaluation criteria.

The acquisition activity is responsible for day-to-day technical and program management. A range of conclusions can result from an ACTD from "don't acquire" to "procurement," or a mid-range solution that places the product into some mid-range posture within the acquisition cycle.

The ACTD concept has been used to good effect within the Joint CBD program, and its use continues today. Current CBD programs operating under the ACTD concept are described below.

Air Base/Port Biological Detection (Portal Shield)

Objective: To provide interim capability to detect, alarm/warn/dewarn, and presumptively identify BW attack.
Evaluate the military utility of sensor network, RF links, alarms, and assessment processes.

Sponsor: CINCPAC and CENTCOM

ACTD Scenario: BW attack on an airbase/port facility.

Status: ACTD completed in FY99, and transitioned into procurement as a result of Joint Chiefs of Staff (JCS) directed buy. Program procured 70 sensors in FY99 and will procure 97 in FY01.

Joint Biological Remote Early Warning System (JBREWS)

Objective: To evaluate the utility of an early warning capability that allows a compressed decision cycle to warn, report and protect deployed forces employing a system of distributive BW agent sensors.

Components include the JBREWS architecture, the Deployable Unit Biological Detection System (DUBDS), the Short Range-Biological Standoff Detection System (SR-BSDS), and the data link from legacy biological detection systems.

Sponsor: EUCOM

ACTD Scenario: BW missile attacks on ground maneuver force in an assembly area

Status: Completed in FY00

Chemical and Biological Individual Sampler (CBIS)

Objective: Improved detection and identification capabilities will provide greater awareness of immediate chemical exposure risk.

More precise identification of both short- or long-term and low-level doses resulting in improved situational awareness, treatment and record keeping.

Additional payoffs will include ability to perform realtime analysis of agents and toxic industrial materials (TIMs), communication of exposure information to command centers, and increased battlefield awareness and intelligence.

Sponsor: Joint Forces Command

ACTD Scenario: TBD

Status: The CBIS Phase I effort (COTS passive chemical sampling only) has been initiated with live agent testing of four COTS samplers and analysis of available portable analytical equipment. The CBIS Blue Ribbon Panel has selected technically promising Phase II proposals. Phase II efforts employ emerging technologies for active chemical and biological samplers/analyzers.

Restoration of Operations at Fixed Sites (RestOps)

Objective: Integrate and demonstrate mature technologies and tools used to mitigate adverse effects and restore operations at a fixed site before, during, or after an attack of either CW or BW, in order to support operational war plans.

Develop, improve, and integrate concepts of operations (CONOPS) and tactics, techniques, and procedures (TTPs) for executing RestOps contingencies at a fixed site.

Capture lessons learned for incorporation into joint, multiservice, and service doctrinal institutions.

Evaluate the science and technologies available to support identification of potential improvements in current U.S. policy for CONUS and OCONUS RestOps scenarios.

Sponsor: PACOM

ACTD Scenario: Chemical or biological attack on an airfield or seaport.

Status: ACTD management coordination and stand-up completed in FY00. Initial technology evaluations conducted and preliminary testing conducted in FY01. Preliminary technology demonstration to be conducted in FY02.

The Joint Service Integration Group (JSIG) is responsible for the coordination and integration of NBC Defense requirements, doctrine, and training. The JSIG initiated a multi-year strategy to address Weapons of Mass Destruction and Nuclear, Biological and Chemical defense (WMD/NBC) in Joint Doctrine and education at Mid/Senior-level, Joint and Service Colleges as recommended in the 1999 JSIG NBC Defense Training and Doctrine assessment. This effort is designed to improve awareness across the entire spectrum of WMD/NBC defense; including doctrine, training, war-games, exercises, and studies. It provides resources to assist the Joint Forces Command (JFCOM) in the Joint Doctrinal review process by providing WMD/NBC input where appropriate. Provide resources to assist Mid/Senior-level, Joint and Service Colleges in reviewing their curriculum for the purpose of incorporating WMD/NBC defense material and providing WMD/NBC expert guest speakers. Workshops will be organized to facilitate coordination of WMD/NBC defense synergism across the Joint Professional Military Education (JPME) system. Action Reports and Lessons Learned of CINC exercises will be used by WMD/NBC experts to assist exercise planners in incorporating WMD/NBC into Commander in Chief (CINC) exercises. The JSIG also sponsors the Joint Senior Leaders Course at the U.S. Army Chemical School (USACMLS). This course is targeted at leaders from all services with the intent of increasing their awareness and understanding regarding NBC defense issues.

Doctrine Initiatives:

OBJECTIVE: Develop a multi-year strategy for the revision and development of Joint/Multiservice CB Doctrine.

PROCESS: Develop working relationship with Service Doctrine Commands, the Air Land Sea Application (ALSA) Center, and the Joint Warfighting Center to lead the effort in the development of multi-service NBC defense doctrine. The JSIG is sponsoring the revision of a core list of multiservice NBC Doctrine publications selected by the services. This core list will provide a logical framework for NBC multiservice tactics, techniques, and procedures (MTTP) that will integrate Service's Tactics, Techniques, and Procedures (TTPs) where possible and provide Service-unique TTPs when different. The JSIG is sponsoring an effort in support of the Joint Staff to provide reviews and recommended inputs to selected joint doctrinal publications. These reviews will facilitate the integration of NBC defense considerations into pertinent joint doctrine. Using the ALSA process, the Doctrine Literature Divisions of the USACMCLS and the U.S. Army Medical Department Center and School (USAMEDDC&S), will develop/revise the non-medical and medical multi-service doctrine publications respectively included in the JSIG approved core list. The Doctrine Literature Divisions will establish Service working groups to develop the multi-service documents and ensure that all Service's concerns are addressed. The selected core multi-service Doctrinal Lists are shown below:

- MTTP for NBC Defense of Theater Fixed Sites, Ports and Airfields
- NBC Contamination Avoidance
- NBC Aspects of Consequence Management
- NBC Operations
- NBC Decontamination (Restoration) MTTP
- NBC Protection MTTP
- Field Behavior of NBC Agents
- Technical Aspects of NBC Agents
- NBC Vulnerability Analysis
- MTTP for NBC Reconnaissance and Surveillance

Medical Multiservice Doctrine Publications

- Health Service Support in a NBC Environment
- Treatment of Nuclear and Radiological Casualties
- Treatment of Biological Warfare Agent Casualties
- Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries
- NATO Handbook on the Medical Aspects of NBC Defensive Operations AmedP-6(B)

Training Initiatives:

OBJECTIVE: Develop a multi-year strategy to promote Joint NBC defense training and enhance Joint warfighting operations.

PROCESS: Assess Joint NBC training via the Joint Training Assessment Working Group (JTAWG) comprised of designated Service training representatives to:

- Promote Joint NBC Defense training
- Monitor Joint NBC Defense training
- Assess Joint NBC Defense training
- Report on assessments and recommend solutions
- Develop Joint Training Road Map
- Produce a Joint NBC Defense Training Development guide
- Enhance Joint warfighting operations

FY00 Accomplishments:

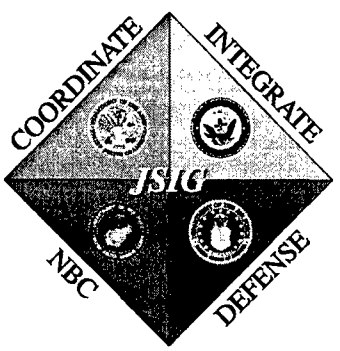
- Supported additional joint participation in the Joint Senior Leader's Course (JSLC).
- Initiated NBC system requirements analysis for:
  - Joint Service Lightweight NBC Reconnaissance System (JSLNBCRS)
  - Joint Warning and Reporting Network (JWARN)
  - Joint Service Sensitive Equipment Decontamination (JSSED)
  - Joint Chemical/Biological Agent Water Monitor (JCBAWM)
- Initiated Chemical Contamination Avoidance Mission Area Analysis (MAA).
- Supported development of Medical, Non-Medical, and Special Operations multi-service core NBC doctrine field manuals.
- Drafted and reviewed joint Operational Requirement Documents (ORDs) for 12 NBC defense programs.
- Initiated implementation of recommendations provided in the NBC Defense Doctrine and Training Assessment.

FY01 Objectives:

- Continue support of additional joint participation in JSLC.
- Conduct NBC system requirements analysis for:
  - Joint Container Refilling System (JCRS)
  - Joint Service Family of Decontamination Systems (JSFDS Block II)
  - Joint Service Mask Leakage Tester (JSMLT)
- Complete Chemical Contamination Avoidance MAA and initiate Battle Management and Biological Contamination Avoidance MAAs.
- Continue support of development of medical, non-medical, and special operations multiservice core NBC doctrine field manuals.
- Draft and review joint ORDs for 15 NBC defense programs.
- Continue implementation of recommendation provided in the NBC Defense Doctrine and Training Assessment.

FY02 Objectives:

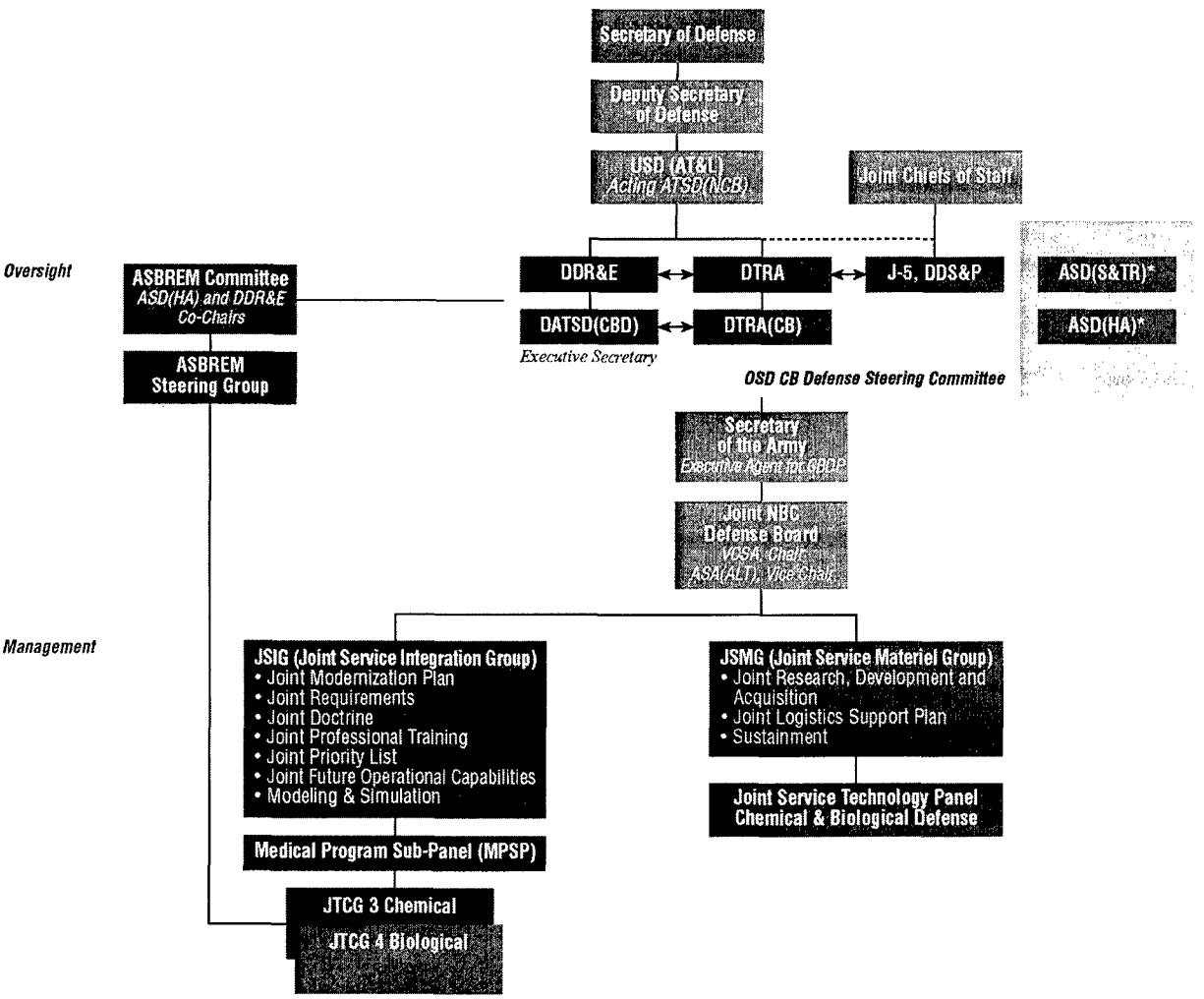
- Continue support of additional joint participation in JSLC.
- Conduct Battle Management Mission Area Assessment (MAA).
- Conduct NBC system requirements analysis for:
  - Joint Chemical Biological Agent Water Monitor (JCBAWM)
  - Joint Ground Effect Model (JGEM)
  - Joint Service Family of Decontamination Systems (JSFDS Block III)
  - Chemical agent prophylaxis
- Complete Battle Management and Biological Contamination Avoidance MAAs and initiate Collective and Individual Protection MAA.
- Continue support of development of medical, non-medical, and special operations multiservice core NBC doctrine field manuals.
- Draft and review joint ORDs for nine NBC defense programs.
- Continue implementation of recommendation provided in the NBC Defense Doctrine and Training Assessment.



Joint Management Structure

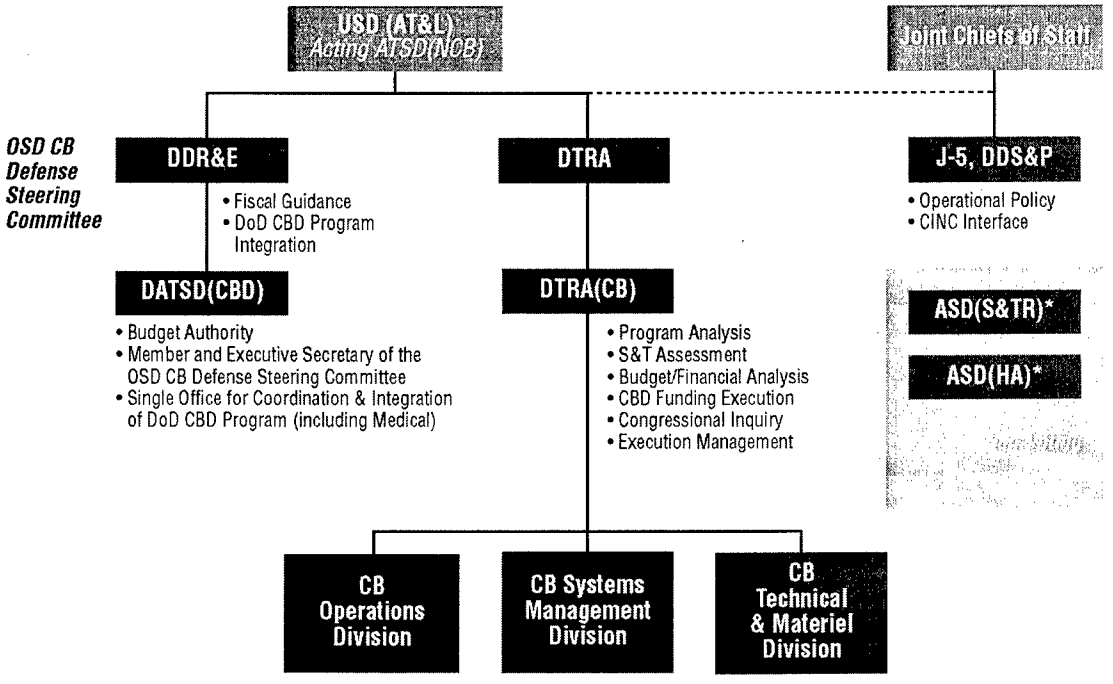
The National Defense Authorization Act of FY94, Public Law No. 103-160, Section 1703 (50 USC 1522), mandates the consolidation of all Department of Defense (DoD) Chemical and Biological (CB) Defense programs. Specific plans to coordinate and integrate the Services' NBC defense efforts are stated in the Joint Service Agreement (JSA), signed July 1994. Detailed procedures of coordination and integration of NBC defense efforts are contained in the DoD Chemical and Biological Defense Program Management Plan, signed September 16, 1996. The Joint NBC Defense Board, established by the JSA, is supported by the Joint Service Integration Group (JSIG) and the Joint Service Materiel Group (JSMG). The JSIG is responsible for the Joint NBC Defense requirements, priorities, training, and doctrine, and the JSMG is responsible for coordinating and integrating all NBC Defense research, development, and acquisition efforts. These two groups perform the planning programming, budgeting, and executing (PPBE) functions for Joint NBC Defense. The illustration below represents the current DoD CB defense management structure.

The Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense Programs (DATSD(CBD)) is responsible for oversight of the DoD Chemical and Biological Defense Program (CBDP). DATSD(CBD) also retains approval authority for all planning, programming, and budgeting documents and is responsible for ensuring coordination between the medical and non-medical CB defense efforts, and management oversight of the DoD CBDP in accordance with 50 USC 1522.



As a result of the Defense Reform Initiative, the Office of the Secretary of Defense (OSD) oversight functions for the CBDP were transferred to the Director, Defense Research & Engineering (DDR&E), while DoD execution management of the program was transferred to the Defense Threat Reduction Agency (DTRA). In FY99, the financial management responsibilities for the CBDP were transferred from the Ballistic Missile Defense Organization to DTRA with DATSD(CBD) retaining overall budget authority for the program. DATSD(CBD) relies extensively on the personnel resources of the Chemical Biological Defense Directorate, DTRA for day-to-day action officer support on CB defense issues.

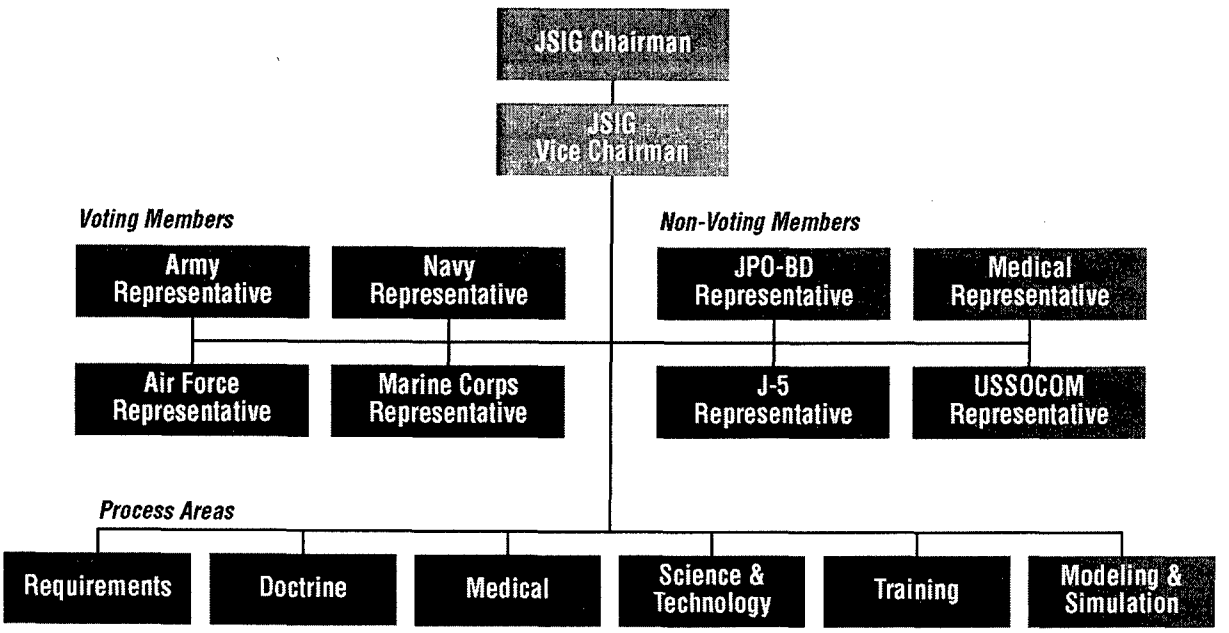
The linkage between DDR&E/DATSD(CBD) and DTRA was strengthened by establishing the OSD CB Defense Steering Committee, which is composed of the DDR&E; the Director, DTRA; the Director, Chemical Biological Defense Directorate, DTRA; from the Joint Staff J-5, Deputy Director, Strategy & Policy; and the DATSD(CBD) who serves as the executive secretary. In FY00 the Assistant Secretary of Defense for Health Affairs (ASD(HA)) and the Assistant Secretary of Defense for Strategy and Threat Reduction (ASD(S&TR)) were added to the Steering Committee as non-voting members. The OSD CB Defense Steering Committee promulgates the DoD CBDP Management Plan, which specifies the relationships and responsibilities among the coordinating agencies and provides the fiscal and programming guidance to the Joint NBC Defense Board (JNBCBD) to develop the Program Objective Memorandum (POM).

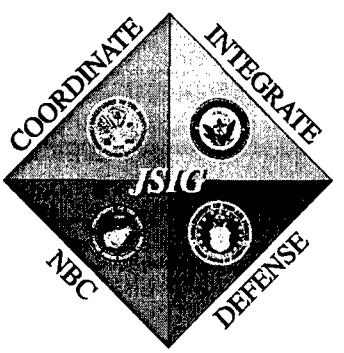


Joint Service Integration Group (JSIG)

The JSIG has the mission to coordinate and integrate the Services' NBC defense requirements and review NBC training and doctrine initiatives. The JSIG develops the Joint Service Modernization Plan, while concurrently developing the Joint requirements, priority list, programs list, and recommends Joint programs. The JSIG will coordinate and participate in the development of JSMG produced documents to include, but not limited to, the Program Objective Memorandum (POM), the Joint Service NBC Defense Research, Development and Acquisition (RDA) Plan, and the Joint Service NBC Defense Logistics Support Plan (LSP). The JSIG also has the responsibility for coordinating, integrating, and developing Joint NBC defense training and doctrine.

The JSIG is chaired by the Commanding General, U.S. Army Maneuver Support Center on behalf of the Commanding General, US Army Training and Doctrine Command. Each Service is represented and has a single vote, with the chairman voting in case of a tie. Additionally, the Joint Staff, U.S. Special Operations Command (USSOCOM), the Joint Program Office for Biological Defense (JPO-BD), and the Joint medical community have non-voting representatives.

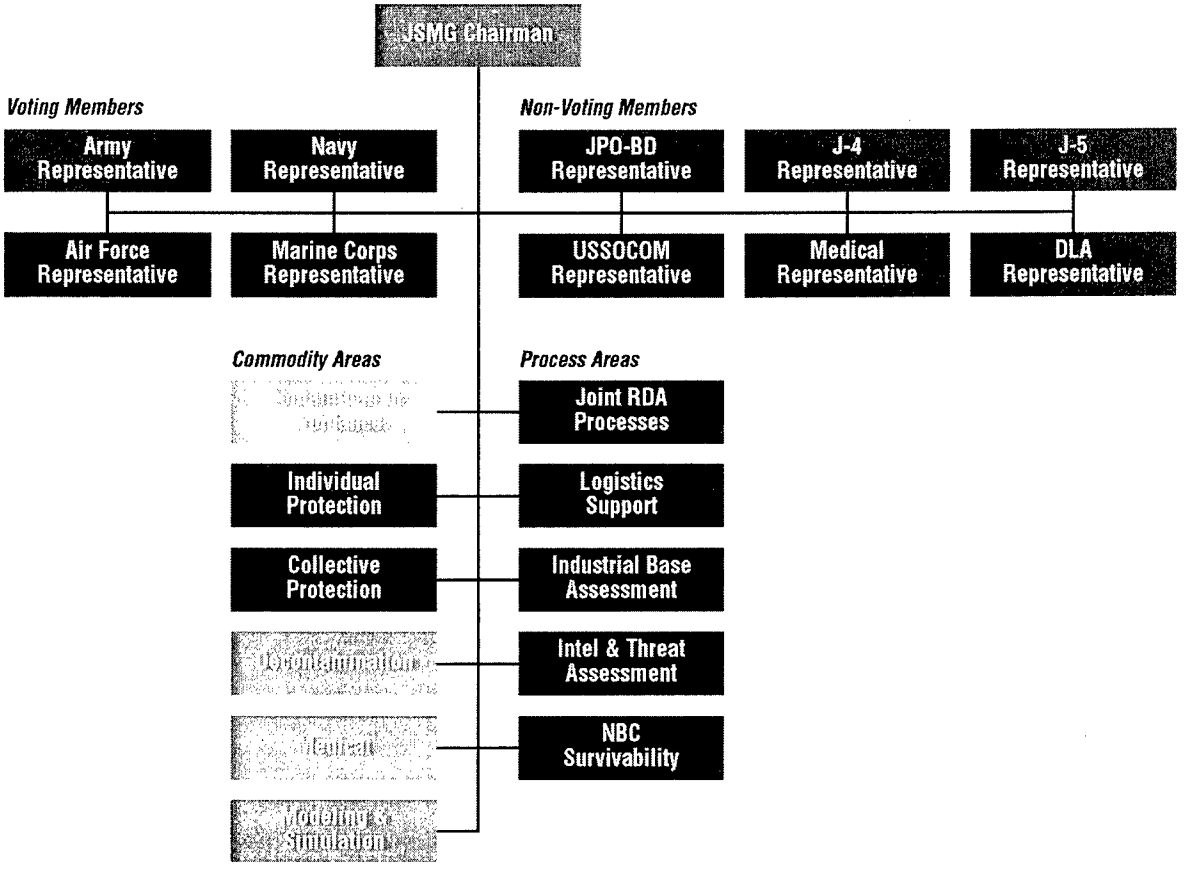




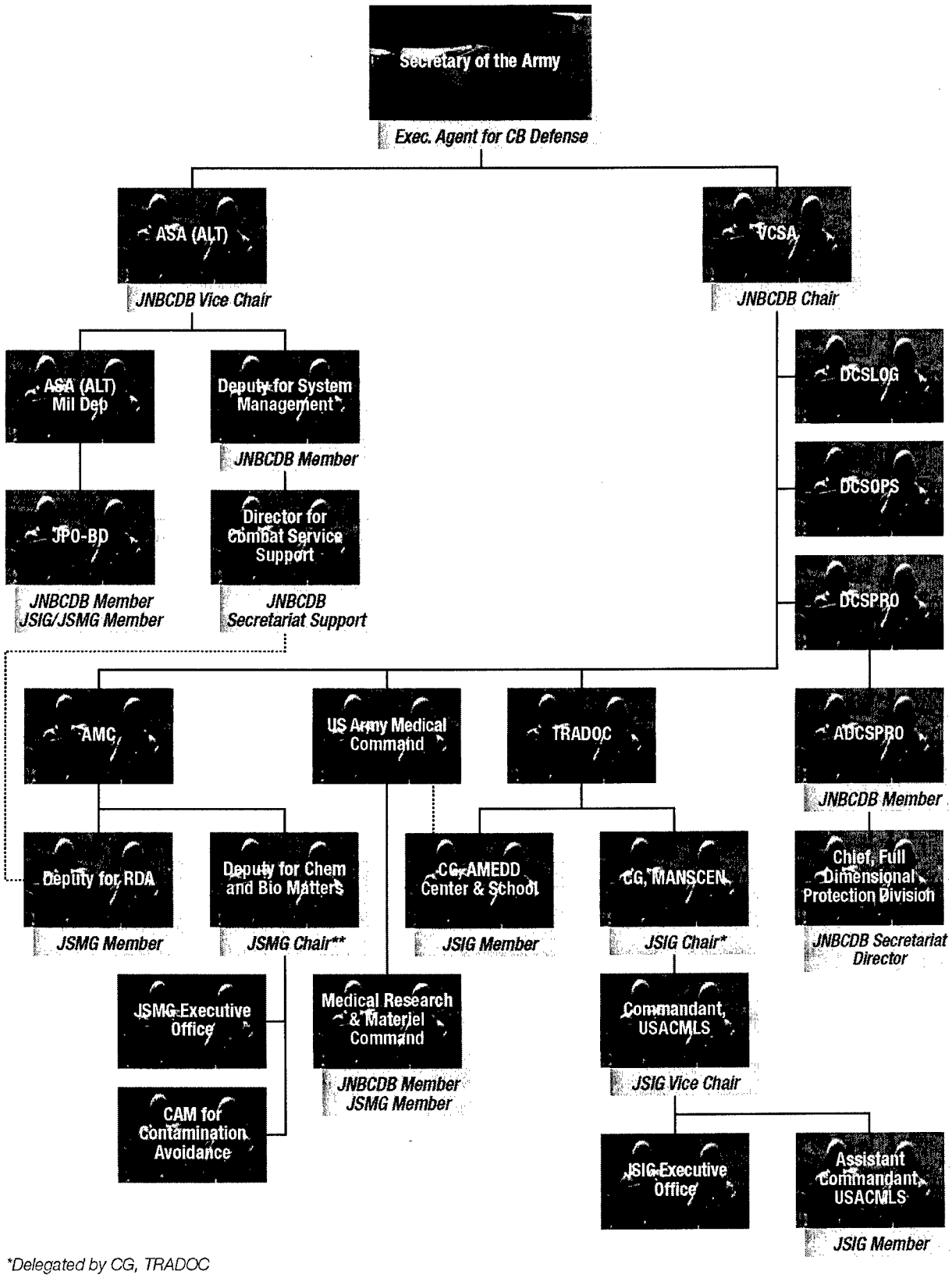
Joint Service Materiel Group (JSMG)

The JSMG coordinates and integrates planning and programming of the Joint NBC Defense Research, Development, and Acquisition, and logistics programs in support of Joint forces requirements. It prepares the Joint Service NBC Defense RDA Plan, the Joint Service NBC Defense LSP, and also reviews arms control, chemical demilitarization, non-stockpile, counter-terrorism (i.e., domestic preparedness), technology base, and developmental programs for possible NBC Defense applications and/or impacts. The JSMG and the JSIG jointly prepare the consolidated NBC Defense POM Strategy.

The JSMG is chaired by the Deputy Chief of Staff for Chemical and Biological Matters, Army Materiel Command (AMC) on behalf of the Commander, AMC. Each service is represented on the JSMG and has a single vote, with the chairman casting the deciding vote in case of a tie. The JSMG coordinates and integrates the Services' NBC Defense science and technology, development and acquisition, logistics readiness, and sustainment planning, programming, and execution.

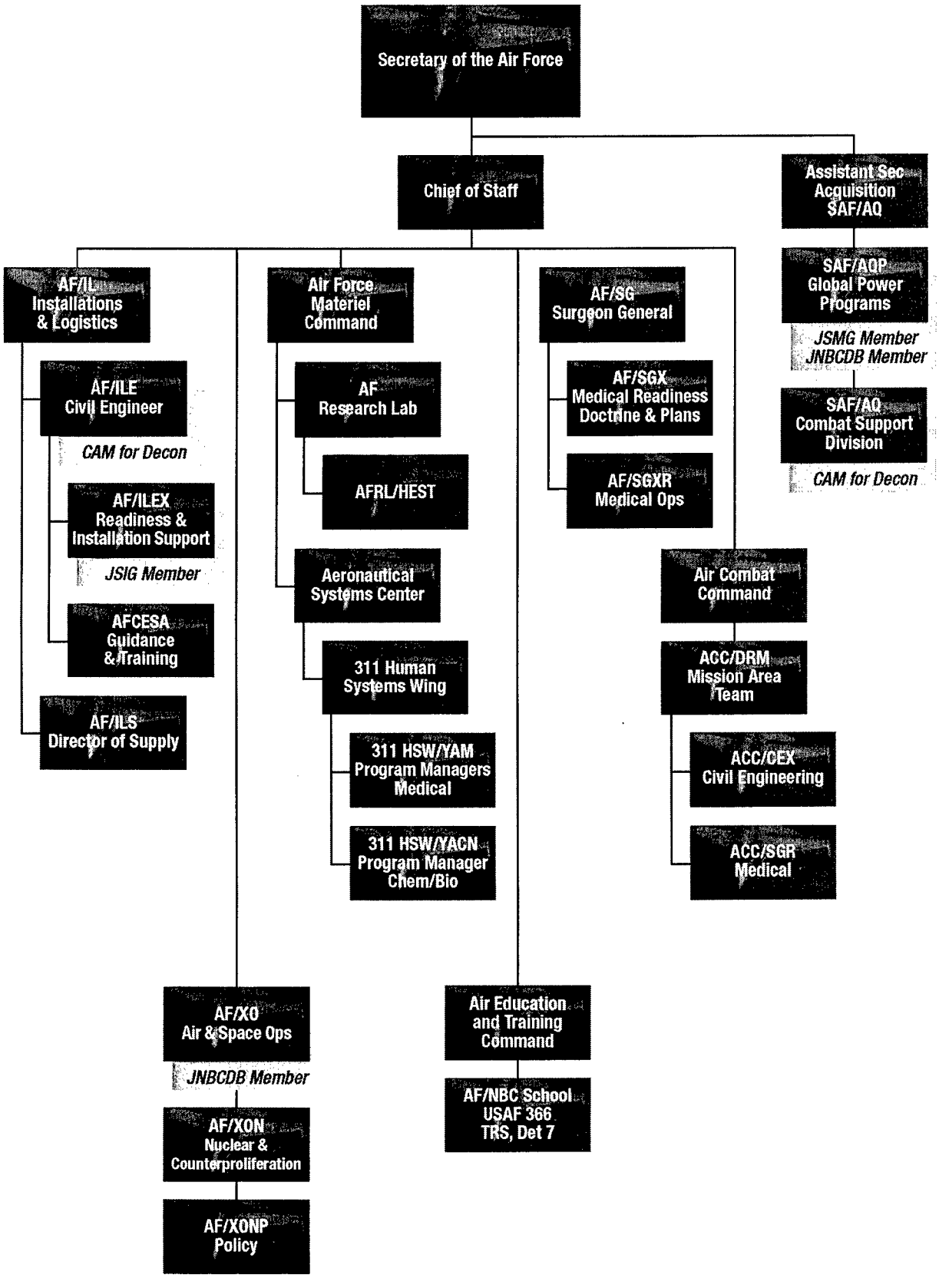


Army CBD Proponent Structure

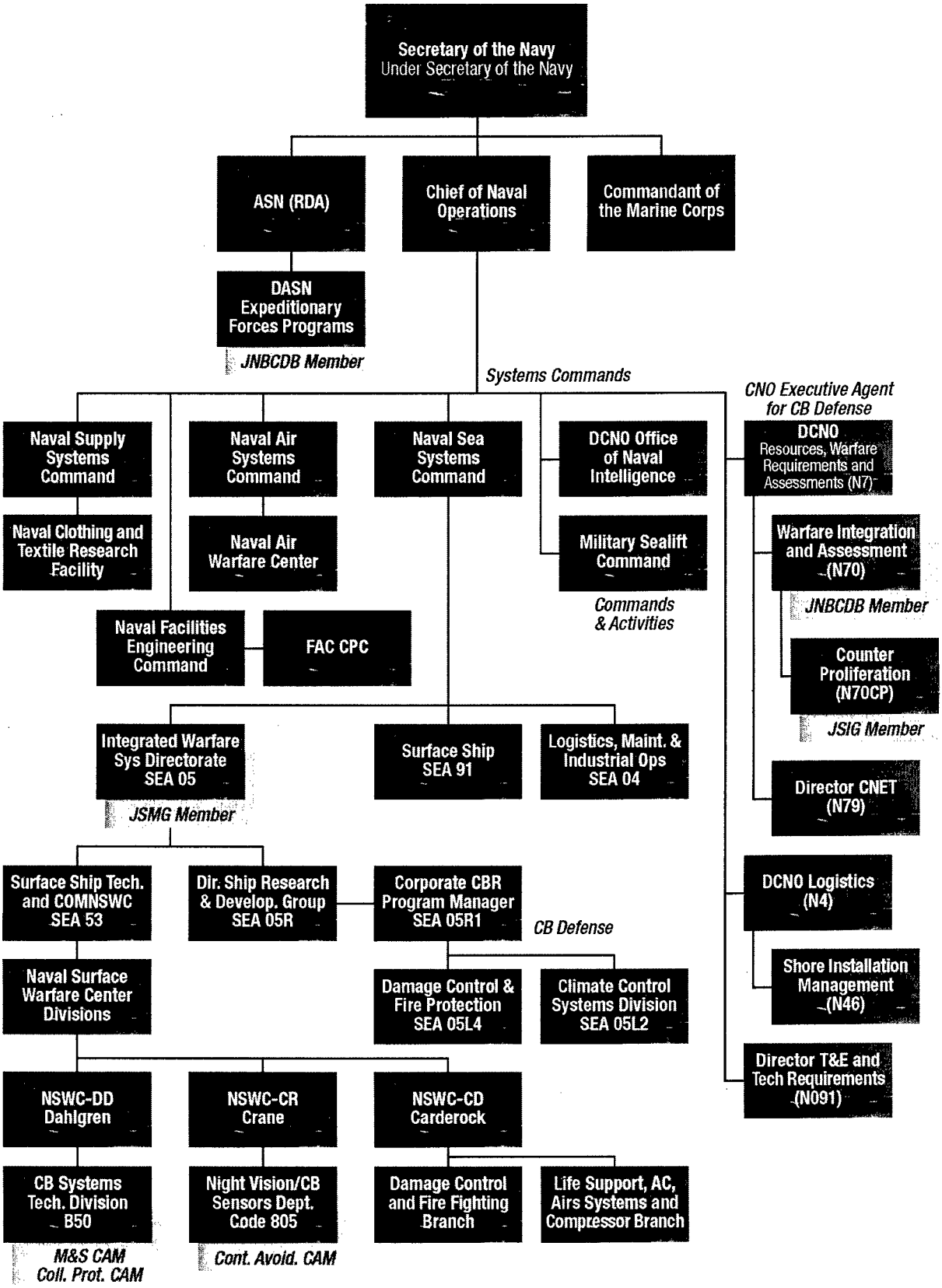


*Delegated by CG, TRADOC
**Delegated by Commander, AMC

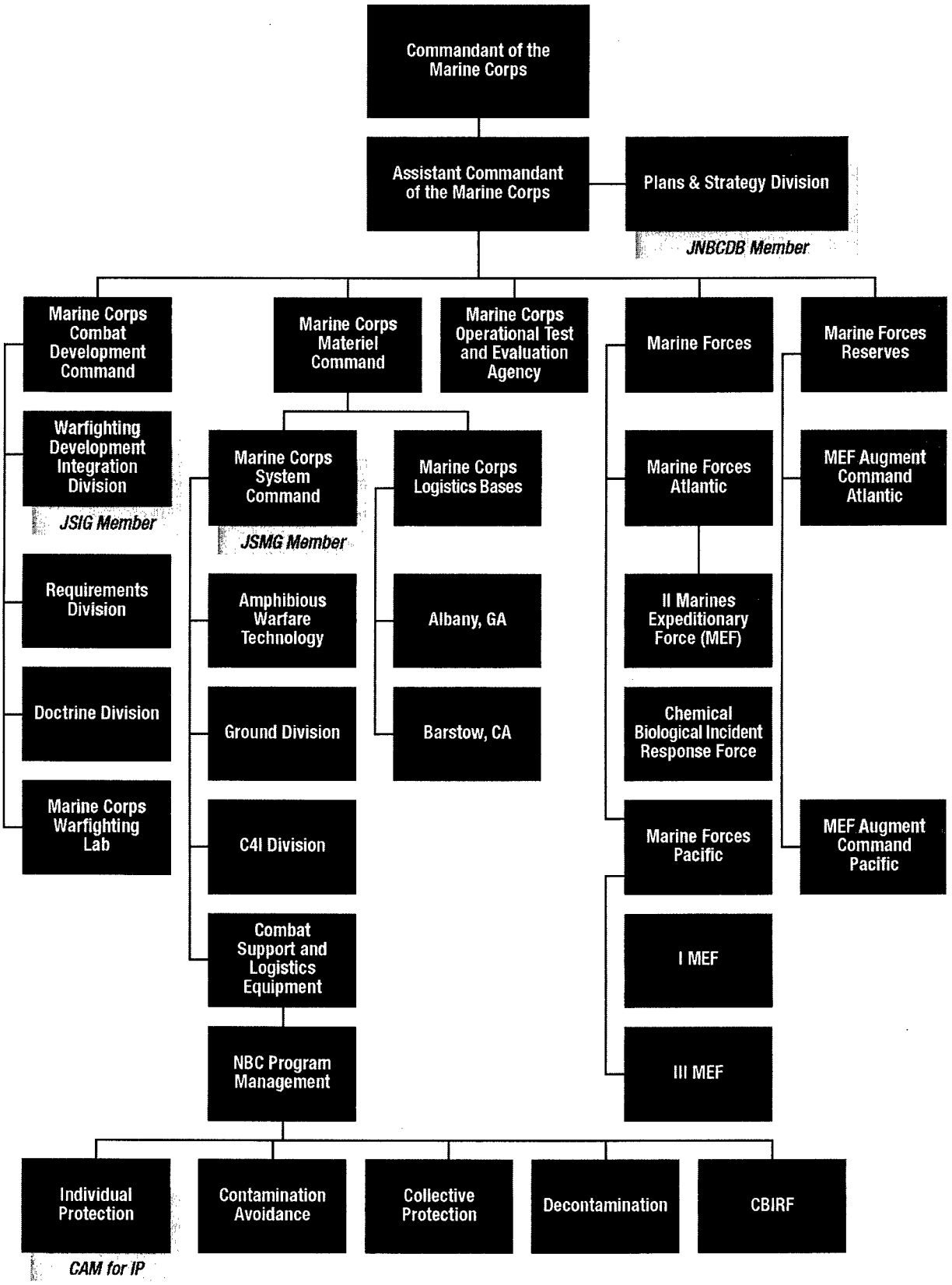
Air Force CBD Proponent Structure



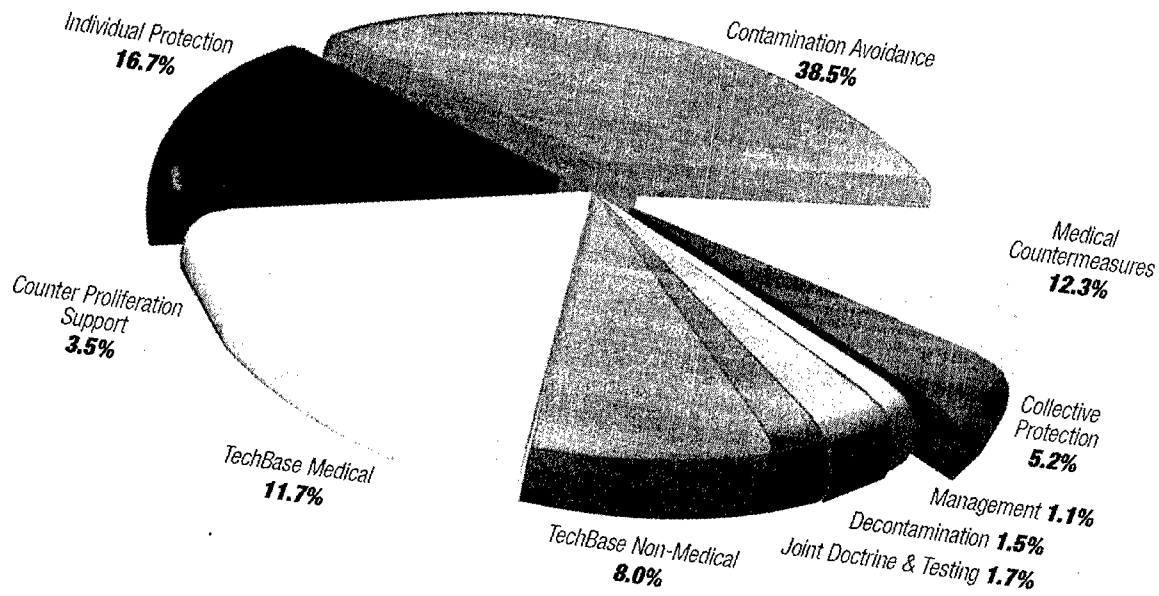
Navy CBD Proponent Structure



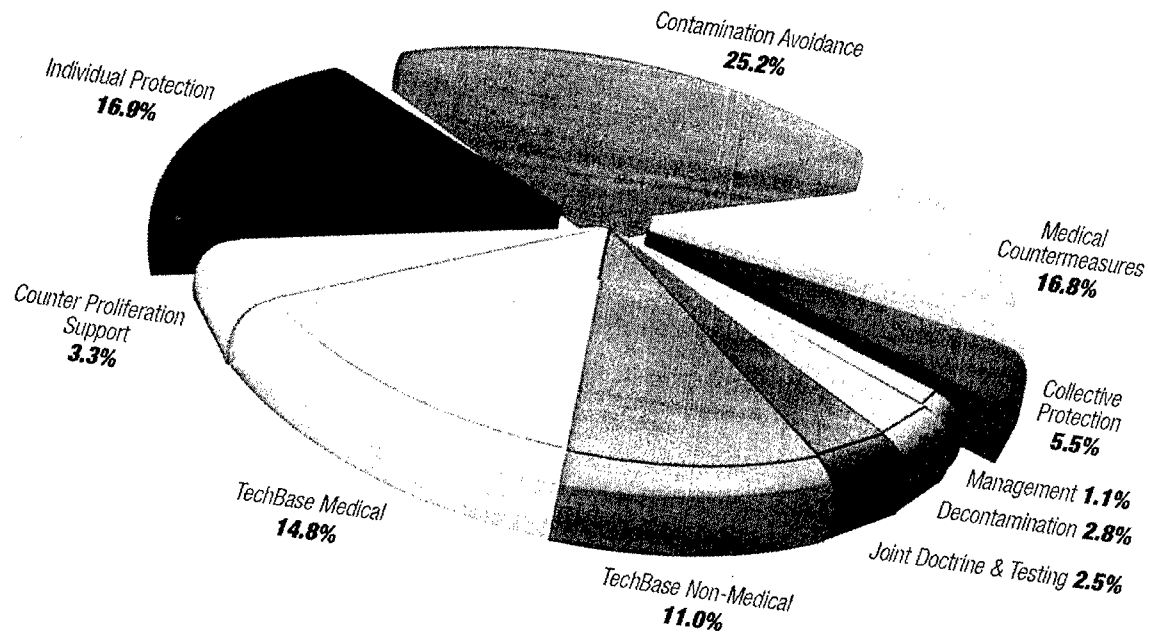
Marine Corps CBD Proponent Structure



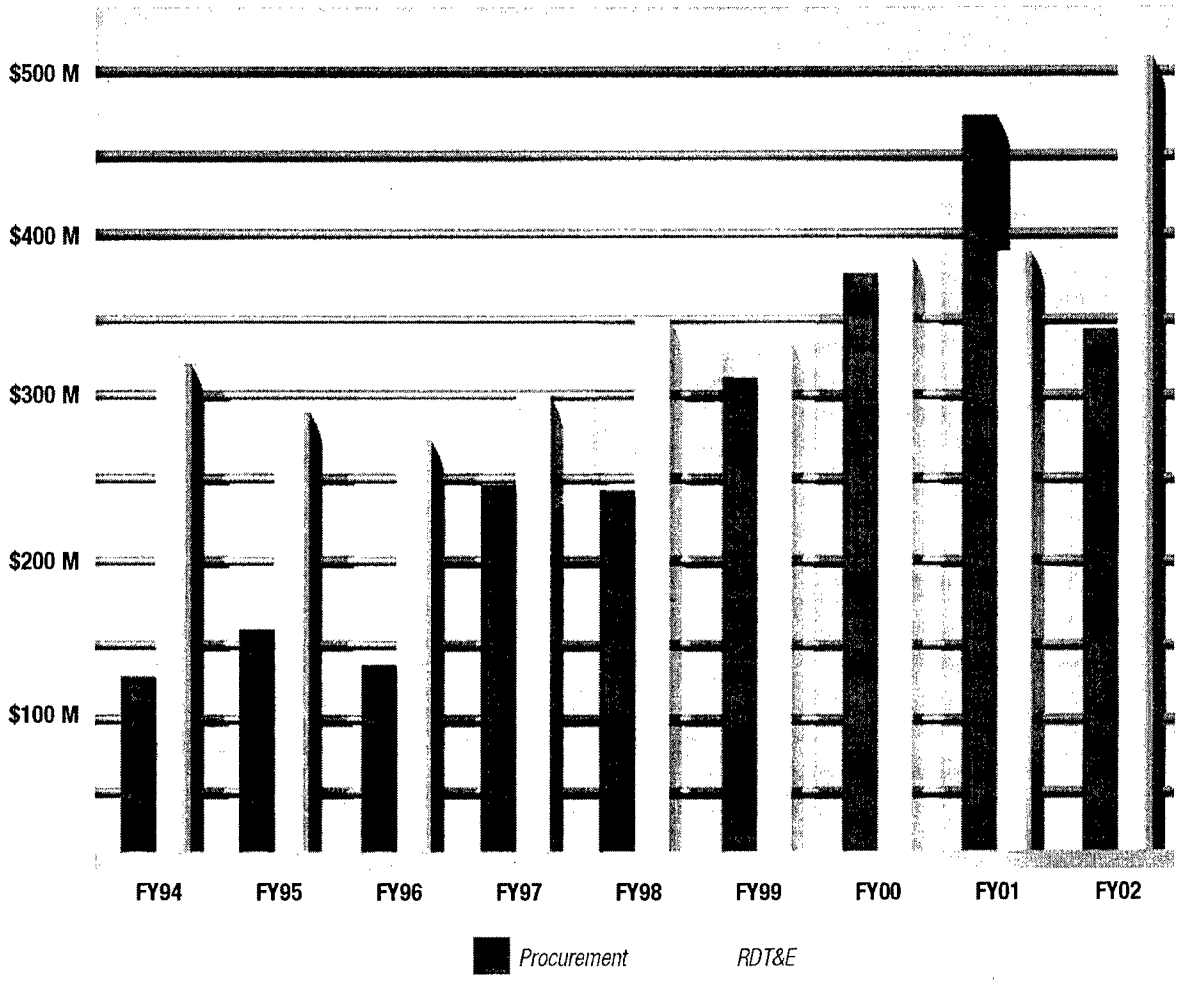
FY01 CBDP Funding Distribution (as a % of total funding)



FY02 CBDP Funding Distribution (as a % of total funding)



Joint Service Chemical and Biological Defense Program



Data based on FY02 Amended President's Budget

Acronyms

AA Abbreviate Analysis
AAN Army After Next
ACADA Automatic Chemical Agent Detector Alarm
ACAT Acquisition Category
ACPG Advanced Chemical Protective Garment
ACTD Advanced Concept Technology Demonstration
ADM Acquisition Decision Memorandum
ADVED Atmospheric Dispersion of Vapor and Evaporating Drops
AF/IL Assistant Chief of Staff (Installations and Logistics)
AF/ILEO Civil Engineer (Operations)
AF/ILEOR Civil Engineer (Operations, Readiness)
AFCESA Air Force Civil Engineer Support Agency (Air Staff Field Operating Agency)
AFOTEC Air Force Operational Test and Evaluation Command
AIROPs Air Operations
AIT Alteration Installation Team
ALSA Air Land Sea Application
AMC Army Materiel Command
ANBACIS Automated, Nuclear, Biological & Chemical Information System
APOD Aerial Port of Debarkation
APOE Aerial Port of Embarkation
AoA Analysis of Alternatives
AOR Area of Responsibility
APBA Acquisition Program Baseline Agreement
AS Acquisition Strategy
ASA(ALT) Assistant Secretary of the Army (Acquisition, Logistics, and Technology)
ASD(HA) Assistant Secretary of Defense (Health Affairs)
ASD(S&TR) Assistant Secretary of Defense (Strategy & Threat Reduction)
ASBREM Armed Services Biomedical Research Evaluation and Management Committee
BAA Broad Agency Announcement
BAWS Biological Agent Warning System
BDS Biological Detection System
BIDS Biological Integrated Detection System
BRP Basic Research Plan
BSDS Biological Standoff Detection System
BTN Below-the-Neck
BV Base Vehicle
BW Biological Warfare
BWC Biological Weapons Convention
C4I2 Command, Control, Communication, Computers, Information and Intelligence
C4ISR Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance
CAM Chemical Agent Monitor
CAM Commodity Area Manager
CAPDS Chemical Agent Point Detection System
CARDS Chemical Agent Remote Detection System
CAWG Capability Assessment Working Group
CB Chemical and Biological
CBD Chemical Biological Defense
CBDE Chemical and Biological Defense Equipment
CBDP Chemical Biological Defense Program
CBIRF Chemical/Biological Incident Response Force
CBMS Chemical, Biological Mass Spectrometer
CBPS Chemically & Biologically Protected Shelter
CBR Chemical, Biological, and Radiological
CBRD Chemical, Biological and Radiological Defense
CBW Chemical and Biological Warfare
CCS Central Control Station
CDPU Central Data Processing Unit
CDR Critical Design Review
CDTF Chemical Defense Training Facility
CDU Control Display Unit
CE Concept Exploration
CENTCOM Central Command
CFD Computational Fluid Dynamics
C-HAG Chemical Hazard Assessment Guide
CHATH Chemically Hardened Air Transportable Hospital
CINC Commander in Chief
CINCPAC Commander in Chief, Pacific Command
CIS Commonwealth of Independent States
CLS Contractor Logistics Support
CNO Chief of Naval Operations
COIC Critical Operations, Issues and Criteria
CONOPs Concepts of Operations
COSAL Coordinated Shipboard Allowance List
COTS Commercial-off-the-Shelf
CP Collective Protection
CP DEPMEDS Chemically Protected Deployable Medical System
CPE Collective Protection Equipment
CPO Chemical Protection Overgarment
CPS Collective Protection System
CRADA Cooperative Research and Development Agreement
CW Chemical Warfare
CWC Chemical Weapons Convention
CWTNA Chemical Warfare Threat to Naval Aviation
DARPA Defense Advanced Research Projects Agency
DATSD(CBD) Deputy Assistant to the Secretary of Defense (Chemical Biological Defense)
DBCRA Defense Base Closure and Realignment Act
DCC Damage Control Central
DCSPRO U.S. Army Deputy Chief of Staff for Programs
DDR&E Director, Defense Research and Engineering
DDR Detailed Design Reviews
DEPSECDEF Deputy Secretary of Defense
DNA Deoxyribonucleic Acid
DoD Department of Defense
DP Decontamination Pumper
DPG Dugway Proving Ground
DPOS Disaster Preparedness Operations Specialist
DT Developmental Test
DT&E Developmental Test & Evaluation
DTAP Defense Technology Area Plan
DTRA Defense Threat Reduction Agency
DTRA, CB Defense Threat Reduction Agency, Chemical Biological Directorate
DU Detector Unit
DUBDS Deployable Unit Biological Detection System
DUSD(AT) Deputy Under Secretary of Defense for Advanced Technology
ECP Engineering Change Proposal
ECU Environmental Control Unit
EDM Engineering Development Model
EDT Engineering Design Test
EEE Eastern Equine Encephalitis
ELISA Enzyme-Linked ImmunoSorbent Assay
EMD Engineering & Manufacturing Development
EOD Explosive Ordinance Disposal
ECBC Edgewood Chemical and Biological Center
EUCOM European Command
FAT First Article Test
FBI Federal Bureau of Investigation
FCA Functional Configuration Audit
FCT Foreign Competitive Test
FDA Food and Drug Administration
FDL Forward Deployable Lab
FEP Final Evaluation Period
FMP Fleet Modernization Process
FOC Full Operational Capability
FR Fire Resistant
FUE First Unit Equipped
FY Fiscal Year
GCCS Global Command and Control System
GFE Government Furnished Equipment
GOTS Government Off-the-Shelf
GPS Global Positioning System
HEPA High-Efficiency Particulate Air
HMMWV High Mobility Multipurpose Wheeled Vehicle
HPW High Pressure Washer
HTH High Test Hypochlorite
IBAD Interim Biological Agent Detector
IAV Interim Armored Vehicle
ICAM Improved Chemical Agent Monitor
ICPS Improved Collective Protection System
ICW Interactive Course Ware
IDC Independent Duty Corpsman
IJAG Ink-Jet Aerosol Generators
ILA Independent Logistic Support Plan
IMS Ion Mobility Spectrometry
IND Investigational New Drug
IOC Initial Operating Capability
IOT&E Initial Operational Test & Evaluation
IP Individual Protection
IPDS Improved (Chemical Agent) Point Detection System
IPE Individual Protection Equipment
IPR In-Progress/In-Process/Interim Program Review
IPS Integrated Program Summary
IPT Integrated Product Team
IS Interium Standardization
ISEA In-Service Engineering Agent
IT Integrated Test
JBAIDS Joint Biological Agent Identification and Diagnosis System
JBPDS Joint Biological Point Detection System
JBREWS Joint Biological Remote Early Warning System
JBUD Joint Biological Universal Detector
JCAD Joint Chemical Agent Detector
JCBUD Joint Chemical Biological Universal Detector
JCPIP Joint Collective Protection Improvement Program
JCS Joint Chiefs of Staff
JFT Joint Field Trial
JILSP Joint Integrated Logistic Support Plan
JNBCDB Joint Nuclear, Biological, Chemical Defense Board
JORD Joint Operational Requirements Document
JPACE Joint Protective Aircrew Ensemble

JPO-BD Joint Program Office for Biological Defense
JSA Joint Service Agreement
JSAM Joint Service Aircrew Mask
JSCBIS Joint Service Chemical and Biological Information System
JSSED Joint Service Sensitive Equipment Decontamination
JSFXD Joint Service Fixed Site Decontamination
JSGPM Joint Service General Purpose Mask
JSIG Joint Service Integration Group
JSLIST Joint Service Lightweight Integrated Suit Technology
JSLNBCRS Joint Service Lightweight Nuclear, Biological, Chemical Reconnaissance System
JSLSCAD Joint Service Lightweight Standoff Chemical Agent Detector
JSMG Joint Service Materiel Group
JSTPCBD Joint Service Technology Panel on Chemical and Biological Defense
JTCG Joint Technology Coordination Group
JTCOPS Joint Transportable Collective Protection Shelter
JVAP Joint Vaccine Acquisition Program
JWARN Joint Warning and Reporting Network
JWCA Joint Warfighting Capability Assessment
JWSTP Joint Warfighting S&T Plan
LAV Lightweight Armored Vehicle
LCCE Life Cycle Cost Estimate
LIDAR Light Detecting and Ranging
LMS Light Multipurpose Shelter
LP Limited Protection
LR/SR Long Range/Short Range
LRIP Low Rate Initial Production
LSP Logistics Support Plan
LUT Limited User Test
LUTE Limited User Test & Evaluation
MAA Mission Area Analysis
MA Multichambered Autoinjector
MARS Multi-warfare Assessment and Research System
MBRR Molecular Biologies Research Resource
MCBC Medical Management of Chemical/Biological Casualties
MDS Modular Decontamination System
MEF Marine Expeditionary Force
MICAD Multipurpose Integrated Chemical Agent Detector
MicroPCM Microencapsulated Phase Change Material
MNS Mission Needs Statement
MOPP Mission Oriented Protective Posture
MOU Memorandum of Understanding
MPF Maritime Prepositioning Force
MRB Milestone Review Board
M&S Modeling and Simulation
MS Milestone
MSC Medical Service Corps
MTW Major Theater War
MULO Multipurpose Overboot
NATO North American Treaty Organization
NAVAIR Systems Command
NAVSEA Navel Sea Systems Command
NBC Nuclear, Biological and Chemical
NBCRS Nuclear, Biological, Chemical Reconnaissance System
NCB Nuclear, Chemical and Biological
NDA New Drug Application
NDI Non-Development Item
NMRI Naval Medical Research Institute
OA Operational Assessment
OCONUS Outside Continental United States
OIPT Overarching Integrated Product Team
ONR Office of Naval Research
OPCERT Operational Certification
OPEVAL Operational Evaluation
ORD Operational Requirements Document
OSD Office of the Secretary of Defense
OT Operational Testing
OT&E Operational Test and Evaluation
P3I Pre-Planned Product Improvement
PAC Post Award conference
PACOM Pacific Command
PADD Passive Anti-Drown Device
PATS Protective Assessment Test System
PC Personal Computer
PCR Polymerase Chain Reaction
PDA Polydiacetylene
PDR Preliminary Design Review
PDRR Program Definition and Risk Reduction
PE Program Element
PIP Product Improvement Proposal/Program
PLA/ELA Product License Application/Establishment License Application
POM Program Objective Memorandum
PPBE Programming, Planning, Budgeting and Execution
PPQT Pre-Production Qualification Testing
PPU Patient Processing Unit
PQT Preliminary/Production Qualification Test
PVT Product Verification Test
QDR Quadrennial Defense Review
RSCAAL Remote Sensing Chemical Agent Alarm
RDA Research, Development, and Acquisition
R&D Research and Development
R-DNA Recombinant Deoxyribonucleic Acid
RDT&E Research, Development, Testing and Evaluation
RDU Remote Display Unit
RestOps Restoration of Operations at Fixed Sites
RF/SAT Radio Frequency/Satellite
RFP Request for Proposal
ROC Required Operational Capability
RRT Risk Reduction Test
S&T Science and Technology
SACPS Selected Are collective Protection System
SAF/AQP Assistant Secretary of the Air Force (Acquisition, Directorate of Global Power Programs)
SAW Surface Acoustic Wave
SBA Simulation Based Acquisition
SBIR Small Business Innovation Research
SCAMP Shipboard Chemical Agent Monitor Portable
SDPR Software Development Program Review
SDR System Design Review
SEB Staphylococcal Enterotoxin B
SECDEF Secretary of Defense
SHIPALT Ship Alteration
SID Shipboard Installation Drawing
SOCOM Special Operations Command
SOF Special Operations Forces
SOO Statement of Objectives
SOP Standard Operating Procedures
SOUTHCOM Southern Command
SPFC Single Particle Fluorescence Cell
SPOD Sea Port of Debarkation
SPOE Sea Port of Embarkation
SR-BSDS Short Range Biological Standoff Detection System
SRR System Requirement Review
SSEB Source Selection Evaluation Board
STA System Threat Analysis
STAR System Threat Analysis Report
SSN Standard Study Number
TAACOM Tank-automotive & Armaments Command
TACAIR Tactical Aircraft
TACWAR Tactical Warfare
TBD To Be Determined
TC Type Classification
TDP Technical Data Package
TECHEVAL Technical Evaluation
TEMP Test and Evaluation Master Plan
TICs Toxic Industrial Chemicals
TIMs Toxic Industrial Materiels
TM Technical Manual
TOC Tactical Operations Center
TOR Tentative Operational Requirement
TPDD Time-phased Deployment Data
TQG Tactical Quiet Generator
TRADOC Training and Doctrine Command
TRR Test Readiness Review
TSP Topical Skin Protectant
TTCP The Technical Cooperation Program
TTP Tactics, Techniques, & Procedures
UAV Unmanned Aerial Vehicle
UJTL Universal Joint Task Listing
ULSS User's Logistic Support Summary
USA United States Army
USACMLS U.S. Army Medical Research Institute of Infectious Diseases
USAF United States Air Force
USAMRMC U.S. Army Medical Research and Material Command
USD(A&T) Under Secretary of Defense for Acquisition and Technology
USMC United States Marine Corps
USN United States Navy
USSOCOM U.S. Special Operations Command
VEE Venezuelan Equine Encephalitis
VIG Vaccine Immune Globulin
VLSTRACK Vapor, Liquid, and Solid Tracking
WEE Western Equine Encephalitis
WIPT Working Integrated Product Team
WMD Weapons of Mass Destruction
WWW World Wide Web

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Joint NBC Defense Board

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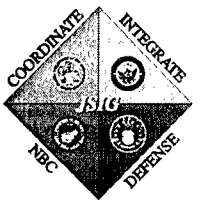

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http://www.acq.osd.mil/cp/welcome.html

Home page of the DATSD(CBD). This site includes summary of activities of the Counterproliferation Support Program, the DoD Chemical and Biological Defense Program, and downloadable versions of reports.

Defense Threat Reduction Agency (DTRA)
http://www.dtra.mil

DTRA consolidates a variety of disparate, yet related, Defense Department functions to deal more effectively with threats posed by WMD.

U.S. Army Soldier and Biological Chemical Command (SBCCOM)
http://www.sbccom.apgea.army.mil

Home page of the U.S. Army Soldier and Biological Chemical Command.

Joint Service Materiel Group (JSMG)
http://www.jsmg.apgea.army.mil

The JSMG coordinates and integrates planning and programming of the nation's NBC Defense research, development, acquisition (RDA) and logistics programs pursuant to Defense Planning Guidance and the intent of the U.S. Congress.

Joint Service Integration Group (JSIG)
http://saviac.xservices.com/jsig/main3.htm

The home page for the JSIG. Provides detailed information about the JSIG, its mission and the NBC requirements process. It provides a link to the JSIG portal which contains a comprehensive list of Operational Requirement Documents (ORDs) and CB program references.

U.S. Army Chemical School (USACMLS)
http://www.wood.army.mil/usacmls

The USACMLS, located at Fort Leonard Wood, Missouri, is one of the most advanced and sophisticated military training centers in the world. It is also the Joint NBC Defense Training Center because the Army, Navy, Air Force, and Marines all conduct their NBC training at the USACMLS.

Joint Service Chemical Biological Information System (JSCBIS)
http://www.sarda.army.mil/jscbis/jscbis.htm

Provides financial and programmatic information for DoD's Chemical and Biological Defense Program. Requires user identification and password, which can be applied for through home page.

Navy Chemical and Biological Defense
http://www.chembiodef.navy.mil

Chief of Naval Operations N86DC and the Commandant of the Marine Corps discuss the strategic direction for Naval Operations into the 21st century.

DefenseLink
http://www.defenselink.mil

The official home page of the Department of Defense. Includes numerous reports and links to DoD organizations.

Chemical and Biological Defense Information Analysis Center (CBIAC)
http://www.cbiac.apgea.army.mil

CBIAC serves as the DoD focal point for Chemical Warfare and Chemical Biological Defense (CW/CBD) technology. The CBIAC serves to collect, review, analyze, synthesize, appraise and summarize information pertaining to CW/CBD. It provides a searchable database for authorized users and links to many other CW/CBD sites.

Joint Program Office – Biological Defense (JPO-BD)
http://www.jpobd.net

The JPO-BD has management oversight responsibility for all DoD Biological Defense (BD) acquisition programs, including enhanced detection systems and BD medical products.

Anthrax Vaccine Immunization Program
http://www.anthrax.osd.mil

Home page for the DoD's anthrax immunization program. The page has links to the history and facts about the program.

The Army Medical Department Center and School
http://www.armymedicine.army.mil/armymed

Provides extensive information about the Army's Medical Department. Includes information on doctrine development and the use of medical NBC defense products.

Program Manager for Chemical Demilitarization
http://www-pmcd.apgea.army.mil

Provides information on the Chemical Stockpile Disposal Program, the Non-Stockpile Chemical Material Program, the Alternative Technologies Program, the Chemical Stockpile Emergency Preparedness Program, and the Cooperative Threat Reduction Office.

United States Army Medical Research Institute of Chemical Defense (USAMRICD)
http://chemdef.apgea.army.mil

Home page for USAMRICD-the nation's lead laboratory for research to advance the medical prevention and treatment of chemical warfare casualties.

U.S. Army Medical Research and Material Command (USAMRMC)
http://mrmc-www.army.mil

Provides information on Medical Chemical Defense Overview, Nerve Agents, Cyanide, Skin Decontamination and Protection, Performance Effects of Protectant Drugs, and Chemical Casualty Management. Linked to U.S. Army Medical Research Institute of Infectious Diseases, location of much of the science and technology research efforts for medical biological defense.

United States Army Medical Research Institute of Infectious Diseases (USAMRIID)
http://www.usamriid.army.mil

Home page of the U.S. Army Medical Research Institute of Infectious Diseases, location of much of the science and technology research efforts for medical biological defense.

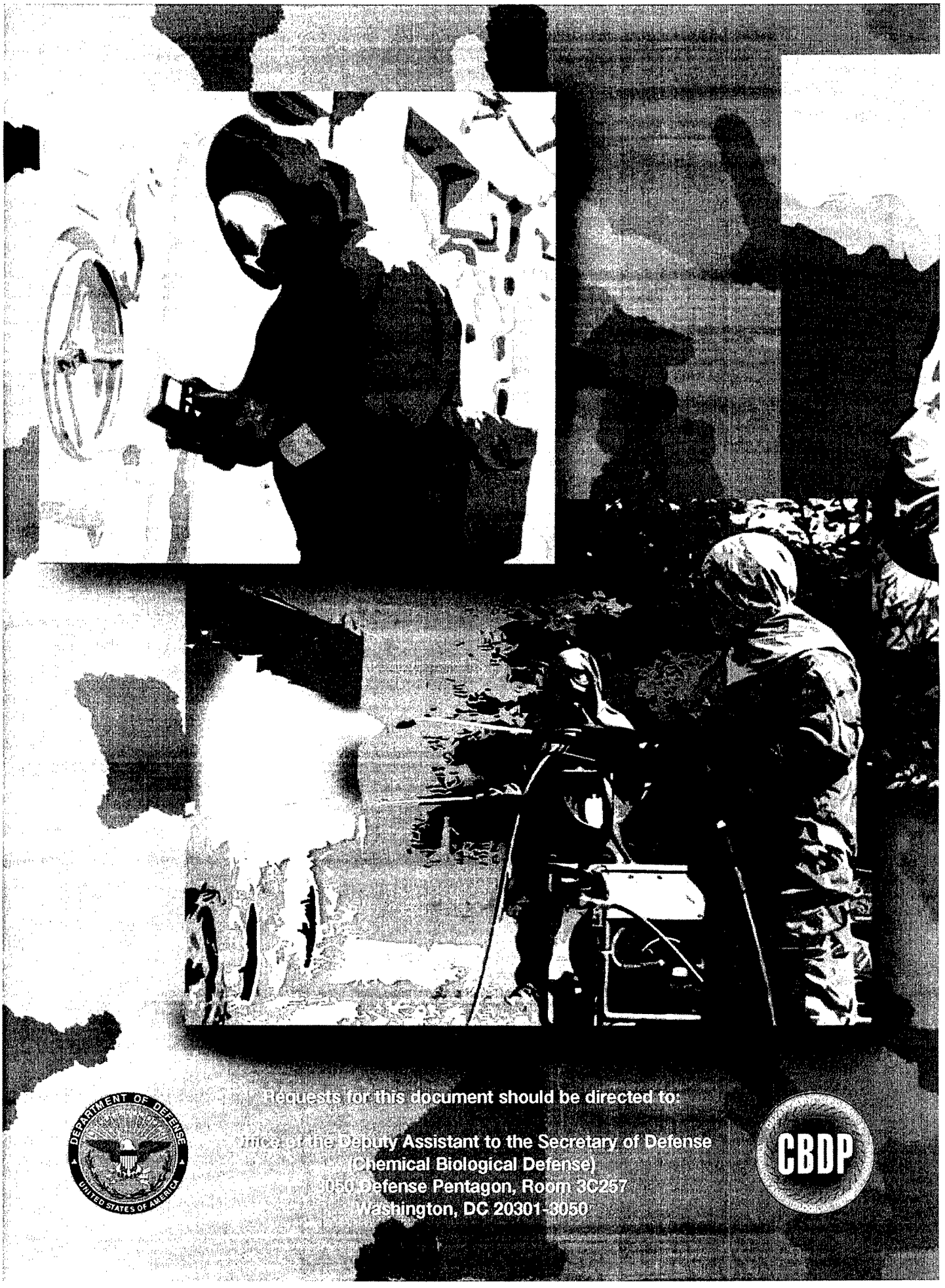
SBCCOM RDA Enterprise Edgewood Site
http://www.sbccom.apgea.army.mil/RDA/index.html

The Army's principal R&D center for chemical and biological defense technology, engineering and services.

Defense Advanced Research Projects Agency (DARPA)
http://www.darpa.mil

The home page of DARPA describes basic and applied research and development of projects being performed for DoD. Link to the Defense Sciences Office (DSO) provides a link to the Biological Warfare Defense (BWD) Program (http://www.bwd.org).

Table of Contents



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